Contents

Number 1 July 2005

EDITORIALS

1 **Maintenance of Certification: A Message from the American Board of Thoracic Surgery (ABTS)**
William A. Gay, Jr, MD

3 **Off-Label Use of Recombinant Factor VIIA Concentrates After Cardiac Surgery**
George Despotis, MD, Michael Avidan, MD, and Douglas M. Lublin, MD, PhD

HAWLEY H. SEILER RESIDENT AWARD PAPER

6 **Using a Miniaturized Circuit and an Asanguineous Prime to Reduce Neutrophil-Mediated Organ Dysfunction Following Infant Cardiopulmonary Bypass**
Tara Karamlou, MD, Jess M. Schultz, MD, Chris Silliman, MD, Chloe Sandquist, MD, Jamie You, CCP, Irving Shen, MD, and Ross M. Ungerleider, MD

ORIGINAL ARTICLES: CARDIOVASCULAR

15 **Extracorporeal Life Support in Neonates, Infants, and Children After Repair of Congenital Heart Disease: Modern Era Results in a Single Institution**
Bahaaldin Alsoufi, MD, Irving Shen, MD, Tara Karamlou, MD, Carmen Giacomuzzi, CCP, Grant Burch, MD, Michael Silberbach, MD, and Ross Ungerleider, MD

22 **High Flow Rates During Modified Ultrafiltration Decrease Cerebral Blood Flow Velocity and Venous Oxygen Saturation in Infants**
Rosendo A. Rodriguez, MD, PhD, Marc Ruel, MD, MPH, Lothar Broecker, CPC, and Garry Cornel, MB, BS

Invited Commentary
Ko Bando, MD

29 **Atrioventricular Valve Procedures with Repeat Fontan Operations: Influence of Valve Pathology, Ventricular Function, and Arrhythmias on Outcome**
Constantine Mavroudis, MD, Robert D. Stewart, MD, MPH, Carl Lewis Backer, MD, Barbara J. Deal, MD, Luciana Young, MD, and Wayne H. Franklin, MD, MPH

37 **Seven-Year Clinical Experience With the Extracardiac Pedicled Pericardial Fontan Operation**
Minoo N. Kavarana, MD, Sebastian Pagni, MD, Michael R. Recto, MD, Walter L. Sobczyk, MD, Thomas Yeh, Jr, MD, PhD, Michael Mitchell, MD, and Erle H. Austin III, MD

44 **Improved Interstage Mortality With the Modified Norwood Procedure: A Meta-Analysis**
Clifford L. Cua, MD, Ravi R. Thiagarajan, MD, Roozbeh Taeed, MD, Timothy M. Hoffman, MD, Lillian Lai, MD, John Hayes, PhD, Peter C. Laussen, MBBS, and Timothy F. Feltes, MD

50 **Late Assessment After Biventricular Repair for Isomerism Heart**
Hajime Ichikawa, MD, Yoshiki Sawa, MD, Norihide Fukushima, MD, Toru Ishizaka, MD, Shigemitsu Iwai, MD, Haruhiko Kondo, MD, and Hikaru Matsuda, MD

56 **Predictive Value of Intraoperative Transesophageal Echocardiography in Complete Atrioventricular Septal Defect**
Hyun Koo Kim, MD, PhD, Woong-Han Kim, MD, PhD, Sung Wook Hwang, MD, Jae Young Lee, MD, Jin Young Song, MD, Soo-Jin Kim, MD, and Ki Young Jang, MD

Invited Commentary
Richard Mainwaring, MD

60 **Acute Sleep Deprivation in the Thoracic Surgical Resident Does Not Affect Operative Outcomes**
Peter I. Ellman, MD, Irving L. Kron, MD, Jeffrey S. Alvis, MD, Carlos Tache-Leon, MD, Thomas S. Maxey, MD, T. Brett Reece, MD, Benjamin B. Peeler, MD, John A. Kern, MD, and Curtis G. Tribble, MD

66 **Recombinant Factor VIIa in the Treatment of Postoperative Hemorrhage After Cardiac Surgery**
Peter Raivio, MD, Raili Suojaranta-Ylinen, MD, PhD, and Anne H. Kuitunen, MD, PhD

72 **Surgical Results of Acute Aortic Dissection Complicated With Cerebral Malperfusion**
Hiroshi Tanaka, MD, Kenji Okada, MD, Teruo Yamashita, MD, Yoshihisa Morimoto, MD, Yujiro Kawanishi, MD, and Yutaka Okita, MD

77 **Axillary Artery Cannulation Improves Operative Results for Acute Type A Aortic Dissection**
Yoshimasa Moizumi, MD, Naotaka Motoyoshi, MD, Kei Sakuma, MD, and Seijiro Yoshida, MD

84 **Femoral Versus Aortic Cannulation for Surgery of Chronic Ascending Aortic Aneurysm**
Fitsum Lakew, MD, Piotr Pasek, MD, Michael Zacher, MD, Anno Diegeler, MD, and Paul P. Urbanski, MD

Invited Commentary
John A. Elefteriades, MD

90 **Aortic Arch Replacement Using a Trifurcated Graft: Simple, Versatile, and Safe**
David Spielvogel, MD, James C. Halstead, MA (Cantab), MRCS, Matthias Meier, MD, Isaac Kadir, FRCS, Steven L. Lansman, MD, PhD, Rohit Shahani, MD, and Randall B. Griepp, MD

96 **Midterm Results of Surgical Treatment of Thoracic Aortic Disease in Dialysis Patients**
Kiyofumi Morishita, MD, PhD, Nobuyoshi Kawaharada, MD, PhD, Johji Fukada, MD, PhD, Yoshihiko Kurimoto, MD, PhD, Yasuaki Fujisawa, MD, Tatsuya Saito, MD, PhD, and Tomio Abe, MD, PhD

101 **Annuloaortic Ectasia and Giant Cell Arteritis**
Sandro Gelsomino, MD, Stefano Romagnoli, MD, Franca Gori, MD, Gabriella Nesi, MD, Chiara Anichini, MD, Carlo Sorbara, MD, Pierluigi Stefàno, MD, and Gian Franco Gensini, MD

106 **The Threat of Adhesive Embolization: BioGlue Leaks Through Needle Holes in Aortic Tissue and Prosthetic Grafts**
Scott A. LeMaire, MD, Stacey A. Carter, BA, Taehee Won, MD, Xinwen Wang, MD, PhD, Lori D. Conklin, MD, and Joseph S. Coselli, MD

112 **Impact of Complete Revascularization on Long-Term Survival After Coronary Artery Bypass Grafting in Octogenarians**
Benjamin D. Kozower, MD, Marc R. Moon, MD, Hendrick B. Barner, MD, Nader Moazami, MD, Jennifer S. Lawton, MD, Michael K. Pasque, MD, and Ralph J. Damiano, Jr, MD

118 **Skeletonized Gastroepiploic Artery as a Composite Graft for Total Arterial Revascularization**
Sang-Wan Ryu, MD, Byoung-Hee Ahn, MD, PhD, Suk-Jung Choo, MD, PhD, Kook-Ju Na, MD, PhD, Young-Keun Ahn, MD, PhD, Myung-Ho Jeong, MD, PhD, and Sang-Hyung Kim, MD, PhD

124 **Flow Capacity of Gastroepiploic Artery Versus Vein Grafts for Intermediate Coronary Artery Stenosis**
Tsuyoshi Shimizu, MD, PhD, Hiroyuki Suesada, MD, PhD, Masaaki Cho, MD, PhD, Shigeki Ito, MD, PhD, Katsusuke Ikeda, MD, PhD, and Shin Ishimaru, MD, PhD

131 **Using the EuroSCORE to Assess Changes in the Risk Profiles of the Patients Undergoing Coronary Artery Bypass Grafting Before and After the Introduction of Less Invasive Coronary Surgery**
Toshihiro Ohata, MD, PhD, Mitsunori Kaneko, MD, Toru Kuratani, MD, Hideki Ueda, MD, and Kazuo Shimamura, MD

136 **On-Pump Versus Off-Pump Surgical Revascularization for Left Main Stem Stenosis: Risk Adjusted Outcomes**
John C. Y. Lu, FRCS, Antony D. Grayson, BS, and D. Mark Pullan, FRCS

Invited Commentary
Yves Louagie, MD, PhD

144 **Off-Pump Coronary Artery Bypass Grafting Using Only Arterial Grafts in Elderly Patients**
Kaoru Matsuura, MD, Junjiro Kobayashi, MD, Osamu Tagusari, MD, Ko Bando, MD, Kazuo Niwaya, MD, Hiroyuki Nakajima, MD, Toshikatsu Yagihara, MD, and Soichiro Kitamura, MD

149 **Comparison of Two Strategies for the Management of Antiplatelet Therapy During Urgent Surgery**
Enoch Akowuah, MD, MRCS, Vivek Shrivastava, MRCS, Binal Jamnadas, MB, ChB, David Hopkinson, MD, FRCS, Pradeep Sarkar, FRCS, Robert Storey, DM, MRCP, Peter Braidley, FRCS, and Graham Cooper, MD, FRCS(C/TH)

153 **Transmural Differences in Myocardial Function and Metabolism During Direct Left Ventricular to Coronary Artery Sourcing**
Sandra de Zeeuw, PhD, Cornelius Borst, MD, PhD, Cees W. J. Verlaan, and Paul F. Gründeman, MD, PhD

Invited Commentary
Gabriel DiLuozzo, MD, and Tomas A. Salerno, MD

163 **Effect of the Left Internal Mammary Artery to the Left Anterior Descending Artery on Mortality and Morbidity After Combined Coronary and Valve Operations**
Shishir Karthik, FRCS, Arun K. Srinivasan, FRCS, Antony D. Grayson, BS, Tim Friede, PhD, and Brian M. Fabri, FRCS(Ed)

170 **Ischemic Mitral Regurgitation: Impact of the Left Ventricle and Mitral Valve in Patients with Left Ventricular Systolic Dysfunction**
Monvadi B. Srichai, MD, Richard A. Grimm, DO, Arthur E. Stillman, MD, PhD, A. Marc Gillinov, MD, L. Leonardo Rodriguez, MD, Michael L. Lieber, MS, Abigail Lara, MD, Joan A. Weaver, RT, (R)MR, Patrick M. McCarthy, MD, and Richard D. White, MD

179 **Prevention of Systolic Anterior Motion After Repair of the Severely Myxomatous Mitral Valve With an Anterior Leaflet Valvuloplasty**
Robert L. Quigley, MD, PhD

183 **Effect of Training in Mitral Valve Repair Surgery on the Early and Late Outcome**
Christos Alexiou, FRCS, PhD, George Doukas, FRCSI, Mehmet Oc, MD, Bahar Oc, MD, Leon Hadjinikolaou, MD, and Tomasz J. Spyt, FRCS, MD

189 **Structural Characterization of the Chordae Tendineae in Native Porcine Mitral Valves**
Jennifer Ritchie, MS, James N. Warnock, PhD, and Ajit P. Yoganathan, PhD

Invited Commentary
Tomasz A. Timek, MD

198 **Midterm Results After Aortic Valve Replacement With a Stentless Bioprosthesis Aortic Valve**
Ivo Martinovic, MD, Manfred Everlien, MD, Ibrahim Farah, MD, Thomas Wittlinger, MD, Igor Knez, MD, PhD, Hans Greve, MD, PhD, and Paul Vogt, MD, PhD

204 **Long-Term Results of the Cloth-Covered Starr-Edwards Ball Valve**
Motomi Shiono, MD, PhD, Yukiyasu Sezai, MD, PhD, Akira Sezai, MD, PhD, Mitsumasa Hata, MD, PhD, Mitsuru Iida, MD, PhD, and Nanao Negishi, MD, PhD

210 **Intraoperative Radiofrequency Ablation for the Treatment of Atrial Fibrillation During Concomitant Cardiac Surgery**
Michael E. Halkos, MD, Joseph M. Craver, MD, Vinod H. Thourani, MD, Faraz Kerendi, MD, John D. Puskas, MD, William A. Cooper, MD, and Robert A. Guyton, MD

217 **Beyond Extended Myectomy for Hypertrophic Cardiomyopathy: The Resection-Plication-Release (RPR) Repair**
Sandhya K. Balaram, MD, PhD, Mark V. Sherrid, MD, Joseph J. Derose, Jr, MD, Zak Hillel, MD, PhD, Glenda Winson, RN, and Daniel G. Swistel, MD

224 **Alternate Waiting List Strategies for Heart Transplantation Maximize Donor Organ Utilization**
Jonathan M. Chen, MD, Mark J. Russo, MD, MS, Kim M. Hammond, RN, Donna M. Mancini, MD, Aftab R. Kherani, MD, Jen M. Fal, BA, Pamela A. Mazzeo, BA, Sean P. Pinney, MD, Niloo M. Edwards, MD, and Yoshifumi Naka, MD, PhD

229 **Paracrine Action Enhances the Effects of Autologous Mesenchymal Stem Cell Transplantation on Vascular Regeneration in Rat Model of Myocardial Infarction**
Yao Liang Tang, MD, PhD, Qiang Zhao, MD, Xinyu Qin, MD, Leping Shen, BS, Leilei Cheng, MD, Junbo Ge, MD, and M. Ian Phillips, PhD, DsC

238 **Initial Experience With a Minimized Extracorporeal Bypass System: Is There a Clinical Benefit?**
Ulf Abdel-Rahman, MD, Feyzan Özaslan, MD, Petar S. Risteski, MD, Sven Martens, MD, PhD, Anton Moritz, MD, PhD, Abdallah Al Daraghmeh, Harald Keller, and Gerhard Wimmer-Greinecker, MD, PhD

Invited Commentary
Mark Kurusz, CCP

245 **Circulatory Arrest and Low-Flow Cardiopulmonary Bypass Alter CREB Phosphorylation in Piglet Brain**
Tatiana Zaitseva, PhD, Gregory Schears, MD, Steven Schultz, MD, Jennifer Creed, BA, Diego Antoni, MD, David F. Wilson, PhD, and Anna Pastuszko, PhD

251 **Platelet Preservation With a Glycoprotein IIb/IIIa Inhibitor in a Porcine Cardiopulmonary Bypass Model**
Norihiro Kondo, MD, Yasuyuki Suzuki, MD, Fuminori Wakayama, MD, Yoshiko Tamai, MD, Kaiqiang Ji, MD, Kozo Fukui, MD, and Ikuo Fukuda, MD

Invited Commentary
Yuji Hiramatsu, MD, PhD

ORIGINAL ARTICLES: GENERAL THORACIC

259 **Tracheoplasty for Expiratory Collapse of Central Airways**
Cameron D. Wright, MD, Hermes C. Grillo, MD, Zane T. Hammoud, MD, John C. Wain, MD, Henning A. Gaissert, MD, Victor Zaydfudim, MD, and Douglas J. Mathisen, MD

Invited Commentary
Eddie Hoover, MD

268 **Morbidity, Survival, and Site of Recurrence After Mediastinal Lymph-Node Dissection Versus Systematic Sampling After Complete Resection for Non-Small Cell Lung Cancer**
Didier Lardinois, MD, Hans Suter, MD, Hassan Hakki, MD, Valentin Rousson, PhD, Daniel Betticher, MD, and Hans-Beat Ris, MD

276 **Prognostic Significance of Carcinoembryonic Antigen Level in Pleural Lavage Fluid for Patients With Lung Adenocarcinoma**
Masaki Tomita, MD, PhD, Tetsuya Shimizu, MD, PhD, Yasunori Matsuzaki, MD, PhD, Masaki Hara, MD, PhD, Takanori Ayabe, MD, PhD, and Toshio Onitsuka, MD, PhD

282 **Specialty Training and Mortality After Esophageal Cancer Resection**
Justin B. Dimick, MD, Philip P. Goodney, MD, MS, Mark B. Orringer, MD, and John D. Birkmeyer, MD

287 **Open Repair of Paraesophageal Hernia: Reassessment of Subjective and Objective Outcomes**
Donald E. Low, MD, FACS, and Trisha Unger, MD

295 **Alternative Surgical Approaches for Apical Neurinomas: A Thoracoscopic Approach**
Shunsuke Endo, MD, Fumio Murayama, MD, Shin-ichi Otani, MD, Kenji Tetsuka, MD, Tsuyoshi Hasegawa, MD, Yukio Sato, MD, and Yasunori Sohara, MD

NEW TECHNOLOGY

299 **Preemptive Use of Bivalirudin for Urgent On-Pump Coronary Artery Bypass Grafting in Patients With Potential Heparin-Induced Thrombocytopenia**
Cornelius M. Dyke, MD, Andreas Koster, MD, James J. Veale, CCP, George W. Maier, MD, Thomas McNiff, MD, and Jerrold H. Levy, MD

Invited Commentary
Simon C. Moten, MD, and Brian Buxton, FRACS

304 **Pericardial Patch Augmentation for Reconstruction of Incompetent Bicuspid Aortic Valves**
Mirko Doss, MD, Reinhard Moid, MD, Jeffrey Paul Wood, MD, Aleksandra Miskovic, MD, Sven Martens, MD, and Anton Moritz, MD

Invited Commentary
Carlos M. G. Duran, MD, PhD

309 **Initial Experience With the Abiomed AB5000 Ventricular Assist Device System**
Louis E. Samuels, MD, Elena C. Holmes, CRNP, Phil Garwood, CCP, and Francis Ferdinand, MD

CASE REPORTS

e-Only Content

e1 **Reversible Tricuspid Valve Stenosis Due to a Metastatic Dissemination of a Noncardiac Sarcoma**
Naia Uribe-Etxebarria, MD, Roberto Voces, MD, Miguel Angel Rodriguez, MD, Alberto Llorente, MD, Pedro Perez, MD, and Jose I. Aramendi, MD

e3 **Benign Oncocytoma of the Trachea**
Maarten Van Genechten, BM, Katrien Schelfout, MD, Paul R.G.A. Germonpré, MD, PhD, Koen Deschepper, MD, and Paul E.Y. Van Schil, MD, PhD

313 **Bench Repair of Donor Aortic Valve With Minimal Access Orthotopic Heart Transplantation**
José L. Navia, MD, Fernando A. Atik, MD, Antonino Marullo, MD, Randall C. Starling, MD, Mario Garcia, MD, Pablo Ruda Vega, MD, Nicholas G. Smedira, MD, and Patrick M. McCarthy, MD

315 **Reversal of Ventricular Dilatation in Aortic Regurgitation After Valve Replacement and Cardiac Support Implant Surgery Using the CorCap Cardiac Support Device**
Anders Franco-Cereceda, MD PhD, Ulf Lockowandt, MD PhD, Jan Liska, MD PhD, and Arne Olsson, MD

316 **Aortic Dissection With Potential Origin From a Mechanical Bypass Anastomosis**
Martin Zinkernagel, MD, Markus J. Wilhelm, MD, Reza Tavakoli, MD, Marko I. Turina, MD, and Michele Genoni, MD

318 **Rescue Visceral Revascularization Without Direct Aortic Surgery to Treat Malperfusion Complicating Type B Aortic Dissection**
Kenji Okada, MD, Taijiro Sueda, MD, Kazumasa Orihashi, MD, Katsuhiko Imai, MD, Yuji Sugawara, MD, and Masaki Hamamoto, MD

320 **Successful Mitral Valve Replacement in a Patient With Ehlers-Danlos Syndrome Type VI**
Hiroshi Takano, MD, Yuji Miyamoto, MD, Yoshiki Sawa, MD, Norihide Fukushima, MD, Goro Matsumiya, MD, Tomoyuki Fujita, MD, and Hikaru Matsuda, MD

322 **Tricuspid Valve Incompetence Caused by an Intracardiac Needle-Like Foreign Body**
Toshiro Kobayashi, MD, Kenji Hayashi, MD, Kensuke Sakata, MD, and Yurio Kobayashi, MD

324 **Pulmonary and Paradoxical Embolism in Protein C and S Deficient Patient**
Sanjay Kumar, MCh, FRCS, Irfan Khan, MRCS, Richard Milton, FRCS, Ayyaz A. Ali, MRCS, and David J. O'Regan, MD, FRCS C-Th

326 **Cardiac Rupture After Catheter Ablation Procedure**
Tetsuya Kono, MD, Hiroto Kitahara, MD, Masayuki Sakaguchi, MD, and Jun Amano, MD

328 **Left Ventricular Pacing Through the Anterior Interventricular Vein in a Patient With Mechanical Tricuspid, Aortic and Mitral Valves**
Masataka Yoda, MD, Bert Hansky, MD, Sebastian Schulte-Eistrup, MD, Reiner Koerfer, MD, PhD, and Kazutomo Minami, MD, PhD

330 **Ross Procedure and Ventricular Septal Defect Correction With Prolapsed Cusp**
Roberto Rocha-e-Silva, MD, PhD, Pablo M. A. Pomerantzeff, MD, PhD, Robinson T. Munhoz, MD, PhD, Domingos D. Lourenço Filho, MD, PhD, Luiz F. Canêo, MD, PhD, and Sérgio A. de Oliveira, MD, PhD

332 **Dor Procedure for Left Ventricular Diverticulum With Mitral Regurgitation in an Infant**
Ko Yoshizumi, MD, Kozo Ishino, MD, Masaaki Kawada, MD, Emi Fujisawa, MD, Shin-ichi Ohstuki, MD, and Shunji Sano, MD

334 **Anomalous Left Coronary Artery, Ventricular Septal Defect, and Double Aortic Arch**
Ganesh Shanmugam, MCh, FRCS, Alistair J. McLennan, MRCS, James C. Pollock, FRCS, and Kenneth J. D. MacArthur, FRCS

336 **Right Pulmonary Artery-to-Left Atrium Communication: Report of 5 Cases**
Ujjwal K. Chowdhury, MCh, Diplomate NB, Balram Airan, MCh, Shyam S. Kothari, DM, FACC, Akhilesh Pandey, MCh, K. Ganapathy Subramaniam, MS, and Panangipalli Venugopal, MCh

338 **Nitric Oxide in Pulmonary Arteriovenous Malformations and Fontan Procedure**
Gonzalo E. Urcelay, MD, Arturo J. Borzutzky, Pedro A. Becker, MD, and Maria E. Castillo, MD

340 **Primary Pulmonary Collision Cancer Consisting of Large Cell Carcinoma and Adenocarcinoma**
Shoji Nakata, MD, Yoshika Nagata, MD, Masakazu Sugaya, MD, Manabu Yasuda, MD, Toshihiro Yamashita, MD, Mitsuhiro Takenoyama, MD, Takeshi Hanagiri, MD, Masaru Morita, MD, Tetsuo Hamada, MD, Kenji Sugio, MD, and Kosei Yasumoto, MD

342 **Lung Volume Reduction Surgery for a Professional Athlete With Swyer-James Syndrome**
Akira Tasaki, MD, and Ryoichi Nakanishi, MD, PhD

344 **Clonal Light Chain Restricted Primary Intrapulmonary Nodular Amyloidosis**
Patrick Ross, Jr, MD, PhD, and Cynthia M. Magro, MD

IMAGES IN CARDIOTHORACIC SURGERY

348 **Destructive Sternitis 3 Years After Blunt Chest Trauma**
Christophe P. M. Jayle, MD, Pierre J. Corbi, MD, Sebastien Franco, MD, and Paul M. Menu, MD

349 **Delayed Esophageal Perforation: A Complication of Anterior Cervical Spine Fixation**
Anastasios K. Konstantakos, MD, and R. Thomas Temes, MD

HOW TO DO IT

350 **Sequential Subxyphoid and Thoracotomy Incisions With Graft Pull Through for Targeted Redo Multivessel Surgical Revascularization**
Hani Shennib, MD, and Osama Benhameid, MD

353 **Hammock-like Graft-Holding Method Using a Cotton Bandage in Off-Pump Coronary Artery Bypass**
Hidefumi Obo, MD, Nobuhiko Mukohara, MD, Masato Yoshida, MD, and Tsutomu Shida, MD

355 **Hydrodissection Technique of Harvesting Left Internal Thoracic Artery**
Pankaj Saxena, MCh, Ross Mejia, MBBS, and Robert Tam, FRACS

357 **Glutaraldehyde Preserved Autologous Pericardium for Patch Reconstruction of the Pulmonary Artery and Superior Vena Cava**
Antonio D'Andrilli, MD, Mohsen Ibrahim, MD, Federico Venuta, MD, Tiziano De Giacomo, MD, G. Furio Coloni, MD, and Erino A. Rendina, MD

REVIEWS

359 **Aspergillus Endocarditis After Cardiac Surgery**
Ismaïl El-Hamamsy, MD, Nicolas Dürrleman, MD, Louis-Mathieu Stevens, MD, Louis P. Perrault, MD, PhD, and Michel Carrier, MD

365 **Right Pulmonary Artery to Left Atrium Communication**
Ujjwal K. Chowdhury, MCh, Diplomate NB, Shyam S. Kothari, DM, FACC, Balram Airan, MCh, K. Ganapathy Subramaniam, MS, and Panangipalli Venugopal, MCh

REPORT

371 **Forty-First Annual Meeting, The Society of Thoracic Surgeons**
Douglas E. Wood, MD

CORRESPONDENCE

381 **Practical Reasons to Review Cases for Plaintiffs**
Lawrence I. Bonchek, MD

Reply
Robert M. Sade, MD

382 **A Recent Graduate's Perspective on Residency Training**
Grayson H. Wheatley III, MD

Reply
Irving Kron, MD, William H. Muller, Jr, MD, Douglas Mathisen, MD, and Hermes C. Grillo, MD

382 **Apolipoprotein E Polymorphism and the Risk of Acute Nephropathy After Cardiac Surgery**
Evagelos N. Liberopoulos, MD, Sofia Tsouli, MD, and Moses S. Elisaf, MD, FACA

Reply
Mark Stafford-Smith, MD, G. Burkhard Mackensen, MD, and Madhav Swaminathan, MD

383 **Weight as a Risk Factor of Mediastinitis After Cardiac Surgery in Context of Insufficient Dosage of Prophylactic Antibiotic**
Jacqueline Grando, MD, Anne Tristan, PharmD, Philippe Vanhems, MD, PhD, Marie Célard, MD, Jean-Jacques Lehot, MD, PhD, Olivier Bastien, MD, PhD, and François Vandenesch, MD, PhD

Reply
Cely S. Abboud, MD, MS, Sérgio B. Wey, MD, PhD, and Valéria T. Baltar, MS

384 **Acute Type A Dissection and Advanced Age**
Eugenio Neri, MD, and Massimo Massetti, MD

Reply
Bruno Chiappini, MD

385 **End-to-End Anastomosis for Ascending Aortic Aneurysm**
Carlo Banfi, MD, PhD, Mauro Rinaldi, MD, Andrea M. D'Armini, MD, and Mario Viganò, MD

Reply
Sinan Arsan, MD

386 **Intercostal Muscle Flaps**
Hermes C. Grillo, MD

ANNOUNCEMENTS

A-36 **Information for Authors**

A-41 **Guidelines for Reviewers**

A-43 **Conditions for Publication Form**

A-45 **Events of Interest**

123 **Online Discussion Forum**

135 **Requirements for Recertification/Maintenance of Certification in 2006**

143 **Notice From the American Board of Thoracic Surgery Regarding Trainees and Candidates for Certification Who Are Called to Military Service Related to the War on Terrorism**

169 **Notice From the American Board of Thoracic Surgery**

244 **The Society of Thoracic Surgeons Policy Action Center**

258 **Southern Thoracic Surgical Association: Fifty-Second Annual Meeting**

267 **The Society of Thoracic Surgeons: Forty-Second Annual Meeting**

281 **Member and Individual Subscriber Access to the Online *Annals***

294 **Thoracic Surgery Resident's Association**

A-49 **2006 Annual Meeting of The Society of Thoracic Surgeons, Call for Abstracts**

A-50 **Information About Membership in The Society of Thoracic Surgeons**

A-51 **Classified Advertisements**

A-61 **Index to Advertisers**

Number 2 August 2005

PRESIDENTIAL ADDRESS

387 **Quality, Safety, and Transparency: A Rising Tide Floats All Boats**
Peter C. Pairolero, MD

THE STATISTICIAN'S PAGE

396 **What is the Future of Mortality Prediction Models in Heart Valve Surgery?**
Edward R. Nowicki, MD

ETHICS IN CARDIOTHORACIC SURGERY

399 **Should Surgical Errors Always Be Disclosed to the Patient?**
Constantine Mavroudis, MD, Constantine D. Mavroudis, Keith S. Naunheim, MD, and Robert M. Sade, MD

400 **Pro**
Constantine Mavroudis, MD, and Constantine D. Mavroudis

403 **Con**
Keith S. Naunheim, MD

406 **Concluding Remarks**
Robert M. Sade, MD

THORACIC SURGERY DIRECTORS ASSOCIATION AWARD

409 **Radiation Therapy Potentiates Effective Oncolytic Viral Therapy in the Treatment of Lung Cancer**
Prasad S. Adusumilli, MD, Brendon M. Stiles, MD, Mei-Ki Chan, BS, Ting-Chao Chou, PhD, Richard J. Wong, MD, Valerie W. Rusch, MD, and Yuman Fong, MD

ORIGINAL ARTICLES: GENERAL THORACIC

418 **Low Morbidity and Mortality for Bronchoplastic Procedures With and Without Induction Therapy**
William R. Burfeind, Jr, MD, Thomas A. D'Amico, MD, Eric M. Toloza, MD, Walter G. Wolfe, MD, and David H. Harpole, MD

423 **Preoperative Chemotherapy Does Not Increase Complications After Nonsmall Cell Lung Cancer Resection**
Emilie Perrot, MD, Benoit Guibert, MD, Pierre Mulsant, MD, Sonia Blandin, MD, Isabelle Arnaud, MD, Pascal Roy, MD, Laurence Geriniere, MD, and Pierre-Jean Souquet, MD

428 **Relevance of Lymph Node Micrometastases in Radically Resected Endobronchial Carcinoid Tumors**
Tommaso Claudio Mineo, MD, Gianluca Guggino, MD, Davide Mineo, MD, Gianluca Vanni, MD, and Vincenzo Ambrogi, MD

Invited Commentary
Scott Swanson, MD

434 **Outcomes of Tracheobronchial Stents in Patients With Malignant Airway Disease**
Anthony Lemaire, MD, William R. Burfeind, MD, Eric Toloza, MD, PhD, Scott Balderson, PA-C, Rebecca P. Petersen, MD, David H. Harpole, Jr, MD, and Thomas A. D'Amico, MD

439 **Preoperative Detection of Pleural Adhesions by Chest Ultrasonography**
Masato Sasaki, MD, PhD, Masakazu Kawabe, MD, Seiya Hirai, MD, Narihisa Yamada, MD, Kouichi Morioka, MD, PhD, Akio Ihaya, MD, PhD, and Kuniyoshi Tanaka, MD, PhD

443 **Intrathoracic Gastric Emptying of Solid Food After Esophagectomy for Esophageal Cancer**
Hyun-Sung Lee, MD, Moon Soo Kim, MD, Jong Mog Lee, MD, Seok Ki Kim, MD, Keon Wook Kang, MD, and Jae Ill Zo, MD, PhD

Invited Commentary
Richard G. Berrisford, FRCS(CTh)

449 **Incidence and Management of Chyle Leakage After Esophagectomy**
Sjoerd M. Lagarde, MD, Jikke M. T. Omloo, MD, Koen de Jong, MS, Olivier R. C. Busch, MD, Hugo Obertop, MD, and J. Jan B. van Lanschot, MD

455 **Thoracoscopic Sympathectomy for Axillary Hyperhidrosis: The Influence of T4**
Peter B. Licht, MD, PhD, Ole D. Jørgensen, MD, PhD, Lars Ladegaard, MD, and Hans K. Pilegaard, MD

461 **Health-Related Quality of Life After Thoracoscopic Sympathectomy for Palmar Hyperhidrosis**
Kojiro Kumagai, MD, Harumi Kawase, MD, PhD, and Minoru Kawanishi, MD, PhD

467 **Oximetry-Derived Perfusion Index for Intraoperative Identification of Successful Thoracic Sympathectomy**
Charles T. Klodell, MD, Emilio B. Lobato, MD, Jessica L. Willert, MD, and Nikolaus Gravenstein, MD

ORIGINAL ARTICLES: CARDIOVASCULAR

471 **Validation and Refinement of Mortality Risk Models for Heart Valve Surgery**
Ruyun Jin, MD, Gary L. Grunkemeier, PhD, and Albert Starr, MD

480 **Ten-Year Outcome After Aortic Valve Replacement with the Freestyle Stentless Bioprosthesis**
David S. Bach, MD, Neal D. Kon, MD, Jean G. Dumesnil, MD, Colleen F. Sintek, MD, and Donald B. Doty, MD

488 **Aortic Valve Replacement With the Pulmonary Autograft: Mid-Term Results**
Arkalgud Sampath Kumar, MCh, Sachin Talwar, MCh, Raghunath Mohapatra, MS, Anita Saxena, DM, and Rajvir Singh, MS, PhD

Invited Commentary
Christophe Acar, MD

495 **Long-Term Results After Aortic Valve Replacement With the Bravo 400 Stentless Xenograft**
Gianluca Polvani, MD, Fabio Barili, MD, Luca Dainese, MD, Manuela Muratori, MD, Massimo Porqueddu, MD, Andrea Sala, MD, and Paolo Biglioli, MD

502 **High-Risk Mitral Valve Surgery: Perioperative Hemodynamic Optimization with Nesiritide (BNP)**
Sacha P. Salzberg, MD, Farzan Filsoufi, MD, Anelechi Anyanwu, MD, Kai von Harbou, MD, Alan Gass, MD, Sean P. Pinney, MD, Alain Carpentier, MD, PhD, and David H. Adams, MD

507 **A Novel Approach to Tricuspid Valve Replacement: The Upside Down Stentless Aortic Bioprosthesis**
Marcelo G. Cardarelli, MD, James S. Gammie, MD, James M. Brown, MD, Robert S. Poston, MD, Richard N. Pierson III, MD, and Bartley P. Griffith, MD

511 **Metabolic and Hemodynamic Effects of High-Dose Insulin Treatment in Aortic Valve and Coronary Surgery**
Juha K. Koskenkari, MD, Päivi K. Kaukoranta, MD, PhD, Kai T. Kiviluoma, MD, PhD, M. J. Pekka Raatikainen, MD, PhD, Pasi P. Ohtonen, MS, and Tero I. Ala-Kokko, MD, PhD

518 **Early Postoperative Use of Unfractionated Heparin or Enoxaparin is Associated with Increased Surgical Re-Exploration for Bleeding**
Heath U. Jones, BS, Joseph B. Muhlestein, MD, Kent W. Jones, MD, Dale G. Renlund, MD, Tami L. Bair, BS, T. Jared Bunch, MD, Benjamin D. Horne, MStat, MPH, Donald L. Lappé, MD, Jeffrey L. Anderson, MD, and Donald B. Doty, MD

523 **Long-Term Results After 27 Years of Surgical Treatment of Acute Type A Aortic Dissection**
M. Erwin S. H. Tan, MD, PhD, Wim J. Morshuis, MD, PhD, Karl M. E. Dossche, MD, PhD, Johannes C. Kelder, MD, Frans G. J. Waanders, and Marc A. A. M. Schepens, MD, PhD

Invited Commentary
Teruhisa Kazui, MD

530 **Antimicrobial Drug Resistance in Salmonella-Infected Aortic Aneurysms**
Ron-Bin Hsu, MD, Fang-Yue Lin, MD, Robert J. Chen, MD, MPH, Po-Ren Hsueh, MD, and Shoei-Shen Wang, MD

537 **Absent Long-Term Benefit of Patch Versus Linear Reconstruction in Left Ventricular Aneurysm Surgery**
Ruediger Lange, MD, Thomas Guenther, MD, Norbert Augustin, MD, Christian Noebauer, MD, Michael Wottke, MD, Raymonde Busch, MS, Norbert Mayr, MD, Hans Meisner, MD, and Klaus Holper, MD

543 **A Multidisciplinary Network To Save the Lives of Severe, Persistent Cardiogenic Shock Patients**
Aly El-Banayosy, MD, Dagmar Cobaugh, MD, Armin Zittermann, PhD, Lukasz Kitzner, MD, Latif Arusoglu, MD, Michiel Morshuis, MD, Hendrik Milting, PhD, Gero Tenderich, MD, and Reiner Koerfer, MD

548 **CardioWest Total Artificial Heart: Bad Oeynhausen Experience**
Aly El-Banayosy, MD, Latif Arusoglu, MD, Michel Morshuis, MD, Lukasz Kizner, MD, Gero Tenderich, MD, Peter Sarnowski, RN, Hendrik Milting, PhD, and Reiner Koerfer, MD, PhD

553 **Mid-Term Results After Thoracoscopic Transmyocardial Laser Revascularization**
Gary S. Allen, MD

559 **Radial Artery Grafts in Women: Utilization and Results**
Jennifer S. Lawton, MD, Hendrick B. Barner, MD, Marci S. Bailey, RN, Tracey J. Guthrie, RN, BSN, Nader Moazami, MD, Michael K. Pasque, MD, Marc R. Moon, MD, and Ralph J. Damiano, Jr, MD

Invited Commentary
Paul Kurlansky, MD

564 **Concomitant Brachiocephalic and Coronary Artery Disease: Outcome and Decision Analysis**
Thomas J. Takach, MD, George J. Reul, MD, J. Michael Duncan, MD, Zvonimir Krajcer, MD, James J. Livesay, MD, Igor D. Gregoric, MD, Roberto D. Cervera, MD, David A. Ott, MD, O. Howard Frazier, MD, and Denton A. Cooley, MD

570 **Long-Term Survival After Surgical Revascularization for Moderate Ischemic Mitral Regurgitation**
Daniel R. Wong, MD, MPH, Arvind K. Agnihotri, MD, Judy W. Hung, MD, Gus J. Vlahakes, MD, Cary W. Akins, MD, Alan D. Hilgenberg, MD, Joren C. Madsen, MD, DPhil, Thomas E. MacGillivray, MD, Michael H. Picard, MD, and David F. Torchiana, MD

Invited Commentary
Robert Dion, MD

579 **Total Arterial Myocardial Revascularization Using Composite and Sequential Grafting With the Off-Pump Technique**
Toshihiro Fukui, MD, Shuichiro Takanashi, MD, Yasuyuki Hosoda, MD, and Shigefumi Suehiro, MD

586 **Hemostasis in Off-Pump Compared to On-Pump Coronary Artery Bypass Grafting: A Prospective, Randomized Study**
Jenny Vedin, MD, Aleksandra Antovic, MD, PhD, Anders Ericsson, MD, PhD, and Jarle Vaage, MD, PhD

594 **Prediction of Graft Flow Impairment by Intraoperative Transit Time Flow Measurement in Off-Pump Coronary Artery Bypass Using Arterial Grafts**
Ki-Bong Kim, MD, PhD, Chang Hyun Kang, MD, and Cheong Lim, MD, PhD

Invited Commentary
Beat H. Walpoth, MD, FAHA

600 **Intramyocardial Left Ventricle-to-Coronary Artery Stent: A Novel Approach for the Treatment of Coronary Artery Disease**
Geng-Hua Yi, MD, Eva Maria Becker, PhD, Nicholas C. Dang, MD, Kun-Lun He, MD, PhD, Patrick Cahalan, BS, Anguo Gu, MD, Myung Jae Lee, BS, Kenward Yue, BS, Daniel Burkhoff, MD, PhD, and Jie Wang, MD, PhD

607 **Video-Assisted Thoracoscopic Pericardial Window for Diagnosis and Management of Pericardial Effusions**
Georgios P. Georghiou, MD, Alon Stamler, MD, Erez Sharoni, MD, Suzana Fichman-Horn, MD, Marius Berman, MD, Bernardo A. Vidne, MD, and Milton Saute, MD

611 **Sivelestat Reduces Inflammatory Mediators and Preserves Neutrophil Deformability During Simulated Extracorporeal Circulation**
Kanji Matsuzaki, MD, Yuji Hiramatsu, MD, PhD, Satoshi Homma, MD, PhD, Shoko Sato, BMT, Osamu Shigeta, MD, PhD, and Yuzuru Sakakibara, MD, PhD

618 **Incidence of Deep Sternal Wound Infections After Tracheostomy in Cardiac Surgery Patients**
Seth Daniel Force, MD, Daniel L. Miller, MD, Rebecca Petersen, BA, Kamal A. Mansour, MD, Joseph Craver, MD, Robert A. Guyton, MD, and Joseph I. Miller, Jr, MD

623 **Numerical Simulation Techniques to Study the Structural Response of the Human Chest Following Median Sternotomy**
Raimund Bruhin, MD, Ulrich Alfred Stock, MD, Jan-Peter Drücker, Tarek Azhari, MD, Jens Wippermann, MD, Johannes Maximilian Albes, MD, Dagmar Hintze, PhD, Stephan Eckardt, Carsten Könke, PhD, and Thorsten Wahlers, MD

631 **Short Operation Time: An Important Element to Reduce Operative Invasiveness in Pediatric Cardiac Surgery**
Makoto Ando, MD, Yukihiro Takahashi, MD, and Toshio Kikuchi, MD

636 **Arterial Switch Operation for Transposition of the Great Arteries With Coronary Arteries From a Single Aortic Sinus**
Si Chan Sung, MD, Yun Hee Chang, MD, Hyoung Doo Lee, MD, Siho Kim, MD, Jong Soo Woo, MD, and Young Seok Lee, MD

642 **Redo Mitral Valve Replacement in Children**
Kirk R. Kanter, MD, Joseph M. Forbess, MD, and Paul M. Kirshbom, MD

647 **Results of Aortic Valve-Sparing and Restoration With Autologous Pericardial Leaflet Extensions in Congenital Heart Disease**
Jonah Odim, MD, PhD, MBA, Hillel Laks, MD, Vivek Allada, MD, John Child, MD, Stacy Wilson, BS, and David Gjertson, PhD

655 **Right Ventricular Outflow Tract Reconstruction With an Allograft Conduit in Non-Ross Patients: Risk Factors for Allograft Dysfunction and Failure**
John W. Brown, MD, Mark Ruzmetov, MD, PhD, Mark D. Rodefeld, MD, Palaniswamy Vijay, PhD, MPH, and Mark W. Turrentine, MD

665 **Specific Issues After Extracardiac Fontan Operation: Ventricular Function, Growth Potential, Arrhythmia, and Thromboembolism**
Ujjwal K. Chowdhury, MCh, Diplomate NB, Balram Airan, MCh, Shyam Sundar Kothari, DM, FACC, Sachin Talwar, MCh, Anita Saxena, DM, Rajvir Singh, PhD, Ganapathy K. Subramaniam, MCh, Kizakke K. Pradeep, MS, Chetan D. Patel, MD, and Panangipalli Venugopal, MCh

Invited Commentary
Marshall Jacobs, MD

673 **Minimally Invasive Midaxillary Muscle Sparing Thoracotomy for Atrial Septal Defect Closure in Prepubescent Patients**
Christian Schreiber, MD, Sabine Bleiziffer, MD, Martin Kostolny, MD, Jürgen Hörer, MD, Andreas Eicken, MD, Klaus Holper, MD, PhD, Peter Tassani-Prell, MD, PhD, and Rüdiger Lange, MD, PhD

Invited Commentary
Roberto M. Di Donato, MD

678 **"Early" Delayed Sternal Closure Following Pediatric Cardiac Surgery**
Shelley Riphagen, FCP, Marilyn McDougall, FCP, Shane M. Tibby, MRCP, Nelson Alphonso, FRCS, David Anderson, FRCS, Conal Austin, FRCS, Andrew Durward, FCP, and Ian A. Murdoch, FRCP

Invited Commentary
Martin Kostelka, MD, PhD

686 **Single-Ventricle Physiology Reduces Cerebral Oxygen Delivery in a Piglet Model**
Marco Ricci, MD, Pierluca Lombardi, MD, Alvaro Galindo, MD, Ernesto Coscarella, MD, Amelia Vasquez, and Eliot Rosenkranz, MD

NEW TECHNOLOGY

695 **The Second-Generation Aortic Connector: Six Months' Angiographic Follow-Up**
Marek Setina, MD, Adriana Krchnakova, MD, Ales Mokracek, MD, Ladislav Pesl, MD, and Luis F. Bonilla, MD

Invited Commentary
Michael J. Mack, MD

700 **A Safe and Cost-Effective Approach to Minimally Invasive Radial Artery Harvesting**
Kimberly Roskoph, PA-C, Forozan Navid, MD, Molly Jubeck, MPA-C, Richelle DiVito, PA-C, Venkat R. Machiraju, MD, Pablo Hong-Barco, MD, Claudio A. B. Lima, MD, and Robert D. Bennett, MD

704 **A Stentless Trileaflet Valve From a Sheet of Decellularized Porcine Small Intestinal Submucosa**
Jennifer K. White, MD, Arvind K. Agnihotri, MD, James S. Titus, and David F. Torchiana, MD

Invited Commentary
Marie-Theres Kasimir, MD, and Ernst Wolner, MD

CASE REPORTS

e-Only Content

e-5 **Successful Treatment of Tachycardia-Induced Cardiomyopathy With LVAD in a 12-Year-Old Boy**
Hideki Tatewaki, MD, Munetaka Masuda, MD, Takahiro Nishida, MD, Yoshikazu Kaji, MD, Hiroya Ushinohama, MD, Shigeki Morita, MD, and Hisataka Yasui, MD

708 **Virtual Vascular Endoscopy for Acute Aortic Dissection**
Fernando Hornero, MD, PhD, Vicente Cervera, MD, Jorge Estornell, MD, Ignacio Rodriguez, MD, Jose A. Buendía, MD, Jose M. Esteban, MD, and Jose A. Montero, MD, PhD

710 **Traumatic Rupture of a Descending Thoracic Aortic Homograft**
Matthias Peltz, MD, Bernardo A. Sandoval, MD, and Michael E. Jessen, MD

712 **Cell Therapy Plus Transmyocardial Laser Revascularization for Refractory Angina**
Luís Henrique W. Gowdak, MD, PhD, Isolmar T. Schettert, MD, Carlos Eduardo Rochitte, MD, PhD, Luiz Augusto F. Lisboa, MD, PhD, Luís Alberto O. Dallan, MD, PhD, Luiz Antônio M. César, MD, PhD, José Eduardo Krieger, MD, PhD, José Antônio F. Ramires, MD, PhD, and Sérgio A. de Oliveira, MD, PhD

714 **Severe Hypothyroidism After Coronary Artery Bypass Grafting**
Apurba Kumar Sarma, MCh, Murali Krishna, MS, Jayakumar Karunakaran, MCh, Praveen Kumar Neema, MD, and Kurur Sankaran Neelakandhan, MCh

716 **Complete Atrioventricular Block Decreases Left Ventricular Assist Device Flow Rate**
Frédéric Collart, MD, Pierre Dieuzaide, MD, François Kerbaul, MD, Annick Mouly-Bandini, MD, and Thierry G. Mesana, MD, PhD

717 **Left Ventricular Assist Device as Destination Therapy in Doxorubicin-Induced Cardiomyopathy**
Sinan A. Simsir, MD, Shu S. Lin, MD, PhD, Laura J. Blue, RN, John P. Gockerman, MD, Stuart D. Russell, MD, and Carmelo A. Milano, MD

719 **Successful Management of Two Heart Transplant Recipients With Mycobacterial Pulmonary Infections**
Torsten Bossert, MD, Hartmuth B. Bittner, PhD, Markus Richter, MD, Axel Rahmel, MD, Markus Barten, MD, Jan F. Gummert, PhD, and Friedrich W. Mohr, PhD

721 **Sliding Plasty Using the Triple-Orifice Technique for Tricuspid Endocarditis**
Hideki Sasaki, MD, Kenji Ihashi, MD, and Kazunori Ishikawa, MD

723 **A Fatal Fungus**
Ishtiaq M. Ahmed, MRCS, Ajay Gupta, MRCS, Kate Gould, FRCPath, and Stephen C. Clark, FRCS

724 **Rupture of a Saphenous Vein Coronary Artery Bypass Graft Due to *Aspergillus* Necrotizing Vasculitis**
Jutta Draganov, MD, H. Michael Klein, MD, Ali Ghodsizad, MD, Martin Gehrke, MD, and Emmeran Gams, MD

726 **Mycotic Aneurysm of the Descending Thoracic Aorta in a 2-kg Neonate**
Nathalie Roy, MD, Anthony Azakiea, MD, Anita J. Moon-Grady, MD, Dominic J. Blurton, MD, and Tom R. Karl, MD

729 **Coarctation of the Thoraco-Abdominal Aorta Associated With Mucopolysaccharidosis VII in a Child**
Osami Honjo, MD, Kozo Ishino, MD, Masaaki Kawada, MD, Shin-ichi Ohtsuki, MD, and Shunji Sano, MD

731 **Aortobronchial Fistula in a Pediatric Patient With Massive Hemoptysis: Treatment by Means of an Aortic Endograft**
Rahul K. Khare, MD, Philip D. Settimi, MD, Nkechi I. Mba, MD, Daniel S. Wechsler, MD, PhD, Susan L. Bratton, MD, MPH, and David M. Williams, MD

733 **Complete Correction of Interrupted Right Aortic Arch With Isolation of Left Subclavian Artery**
Nicolas Amabile, MD, Olivier Ghez, MD, Françoise Aubert, MD, Caroline Ovaert, MD, Alain Fraisse, MD, Bernard Kreitmann, MD, and Dominique Metras, MD

735 **Simultaneous Second-Stage Norwood Operation and Tracheoplasty**
Pablo R. García, MD, Patricio Varela, MD, Luis León, MD, Luis Sánchez, MD, Guillermo Zamora, MD, Oscar Gómez, MD, and Stephan Haecker, MD

737 **Surgical Treatment of Intramyocardial Foregut Cysts**
Richard Curran, MBBS, and Hugh S. Paterson, FRACS

739 **Stiff Man Syndrome With Thymoma**
Hisaichi Tanaka, MD, Akihide Matsumura, MD, Meinoshin Okumura, MD, Masataka Kitaguchi, MD, Satoru Yamamoto, MD, and Keiji Iuchi, MD

741 **Papillary Carcinoma of the Thymus Gland**
Mitsuru Yoshino, MD, Kenzo Hiroshima, MD, Shinichiro Motohashi, MD, Kiyoshi Shibuya, MD, Akira Iyoda, MD, Yasuo Sekine, MD, and Takehiko Fujisawa, MD

IMAGES IN CARDIOTHORACIC SURGERY

743 **Magnetic Resonance Imaging Evaluation of Surgical Ventricular Reconstruction**
Shunsuke Natori, MD, PhD, John V. Conte, MD, João A. C. Lima, MD, and David A. Bluemke, MD, PhD

744 **Saccular Aneurysm at the Aortic Isthmus**
Sofia Martìn-Suàrez, MD, Andrea Dell'Amore, MD, Davide Pacini, MD, Emanuela Angeli, MD, Antonino Loforte, MD, Guido Oppido, MD, and Roberto Di Bartolomeo, MD

HOW TO DO IT

745 **Anterior Approach to Implant the Jarvik 2000 With Retroauricular Power Supply**
Michael P. Siegenthaler, MD, Jürgen Martin, MD, Ralf Gutwald, MD, DMD, Roderich Bahr, MD, Stephen Westaby, MD, Rainer Schmelzeisen, MD, DMD, and Friedhelm Beyersdorf, MD

748 **The Florida Sleeve: A New Technique for Aortic Root Remodeling With Preservation of the Aortic Valve and Sinuses**
Philip J. Hess, Jr, MD, Charles T. Klodell, MD, Thomas M. Beaver, MD, and Tomas D. Martin, MD

751 **Minimally Invasive Surgical Alternatives for Left Ventricle Epicardial Lead Implantation in Heart Failure Patients**
José L. Navia, MD, and Fernando A. Atik, MD

755 **Thoracoscopic Rib Resection Using a Gigli Saw**
Tomoyuki Nakagiri, MD, Akinori Akashi, MD, and Norihisa Shigemura, MD

REVIEWS

757 **Effect of Cardioplegic and Organ Preservation Solutions and Their Components on Coronary Endothelium-Derived Relaxing Factors**
Qin Yang, MD, PhD, and Guo-Wei He, MD, PhD, DSc

768 **Balancing the Benefit and Risk of Oral Antiplatelet Agents in Coronary Artery Bypass Surgery**
Christopher P. Cannon, MD, Shamir R. Mehta, MD, MS, and Sary F. Aranki, MD

KEY REFERENCES

780 **Cognitive Dysfunction Following Cardiopulmonary Bypass and Cerebral Protection**
Ola A. Selnes, PhD, and William A. Baumgartner, MD

CORRESPONDENCE

788 **Mechanical Bioprosthesis**
Didier M. Lapeyre, MD

Reply
Igor D. Gregoric, MD

788 **Screening of Peripheral Vascular Disease in Patients Facing Coronary Surgery: Is Invasive Angiography Really Out?**
Gianluca Rigatelli, MD, FESC, and Giorgio Rigatelli, MD, FESC

789 **Orthotopic Cardiac Transplantation: Modification of Bicaval Anastomosis**
Nikolaos B. Tsilimingas, MD

789 **Menopausal Status and Non-Small Cell Lung Cancer**
Thomas J. Birdas, MD

Reply
Kimberly A. Moore, MD, Michael T. Jaklitsch, MD, and Jeanne M. Lukanich, MD

790 **Is Identification of Prognostic Factors for Lung Metastasectomy Sufficient to Establish Selection Criteria?**
C S Pramesh, MS, FRCS, Rajesh C Mistry, MS, and Vivek V Upasani, MS

Reply
Masayoshi Inoue, MD, PhD

791 **Neuroapraxia**
Theodosios Dosios, MD, FACS

Reply
Suat Canbaz, MD, Enver Duran, MD, and Nilda Turgut, MD

REVIEW OF RECENT BOOKS

792 **Surgery of the Trachea and Bronchi by Hermes Grillo, MD**
Frederick Griffith Pearson, MD

ANNOUNCEMENTS

A-28 **Information for Authors**

A-33 **Guidelines for Reviewers**

A-35 **Conditions for Publication Form**

A-37 **Events of Interest**

442 **Online Discussion Forum**

454 **Requirements for Recertification/ Maintenance of Certification in 2006**

466 **Notice From the American Board of Thoracic Surgery Regarding Trainees and Candidates for Certification Who Are Called to Military Service Related to the War on Terrorism**

501 **Notice From the American Board of Thoracic Surgery**

506 **Southern Thoracic Surgical Association: Fifty-Second Annual Meeting**

536 The Society of Thoracic Surgeons: Forty-Second Annual Meeting

585 The Thoracic Surgery Foundation for Research and Education

617 The Society of Thoracic Surgeons Policy Action Center

641 Member and Individual Subscriber Access to the Onine *Annals*

782 The Thoracic Surgery Foundation for Research and Education: Thanks to TSFRE 2004 Donors

A-41 Classified Advertisements

A-49 Index to Advertisers

Number 3 September 2005

ETHICS IN CARDIOTHORACIC SURGERY

793 **Medical Ethics Collides With Public Policy: LVAD for a Patient With Leukemia**
Patrick M. McCarthy, MD, Richard D. Lamm, LLB, CPA, and Robert M. Sade, MD

794 **Pro**
Patrick M. McCarthy, MD

795 **Con**
Richard D. Lamm, LLB, CPA

797 **Concluding Remarks**
Robert M. Sade, MD

THE STATISTICIAN'S PAGE

799 **Mandatory Database Participation: Risky Business?**
Gary L. Grunkemeier, PhD, and Anthony P. Furnary, MD

ORIGINAL ARTICLES: CARDIOVASCULAR

802 **Evaluation of Web-Based Learning Tools: Lessons Learned from the Thoracic Surgery Directors Association Curriculum Project Three-Year Experience**
Jeffrey P. Gold, MD, William B. Begg, BA, David A. Fullerton, MD, Douglas J. Mathisen, MD, Mark B. Orringer, MD, and Edward D. Verrier, MD

811 **Ischemic Versus Degenerative Mitral Regurgitation: Does Etiology Affect Survival?**
A. Marc Gillinov, MD, Eugene H. Blackstone, MD, Jeevanantham Rajeswaran, MS, Maurice Mawad, MD, Patrick M. McCarthy, MD, Joseph F. Sabik III, MD, Takahiro Shiota, MD, Bruce W. Lytle, MD, and Delos M. Cosgrove, MD

820 **Risk Factors of Posterior Pericardial Annuloplasty for Isolated Posterior Leaflet Prolapse**
Seiji Matsukuma, MD, Kiyoyuki Eishi, MD, Shiro Yamachika, MD, Hiroichiro Yamaguchi, MD, Tsuneo Ariyoshi, MD, Youichi Hisata, MD, Kazuyoshi Tanigawa, MD, Kenta Izumi, MD, and Hideaki Takai, MD

825 **Prognosis After Aortic Valve Replacement With the Carpentier-Edwards Pericardial Valve: Use of Microsimulation**
John P. A. Puvimanasinghe, MD, PhD, Johanna J. M. Takkenberg, MD, PhD, Marinus J. C. Eijkemans, PhD, Ewout W. Steyerberg, PhD, Lex A. van Herwerden, MD, PhD, Gary L. Grunkemeier, PhD, J. Dik F. Habbema, PhD, and Ad J. J. C. Bogers, MD, PhD

832 **Aortic Homograft: A Suitable Substitute for Aortic Valve Replacement**
Sachin Talwar, MCh, Raghunath Mohapatra, MS, Anita Saxena, DM, Rajvir Singh, MS, PhD, and Arkalgud Sampath Kumar, MCh

Invited Commentary
Wei-Guo Ma, MD

839 **Valve-Sparing Aortic Root Repair With Patch Technique**
Paul P. Urbanski, MD

Invited Commentary
Michael J. Reardon, MD, and Jon-Cecil Walkes, MD

845 **Long-Term Outcomes of Tricuspid Valve Replacement in the Current Era**
Farzan Filsoufi, MD, Ani C. Anyanwu, MD, Sacha P. Salzberg, MD, Tim Frankel, MD, Lawrence H. Cohn, MD, and David H. Adams, MD

851 **Mechanisms for Recurrent Left Ventricular Outflow Tract Obstruction After Septal Myectomy for Obstructive Hypertrophic Cardiomyopathy**
Kenji Minakata, MD, Joseph A. Dearani, MD, Hartzell V. Schaff, MD, Patrick W. O'Leary, MD, Steve R. Ommen, MD, and Gordon K. Danielson, MD

857 **Endovascular Repair of the Thoracic Aorta: Lessons Learned**
Frank J. Criado, MD, Omran R. Abul-Khoudoud, MD, Gregory S. Domer, MD, Christine McKendrick, RN, Mark Zuzga, DO, Nancy S. Clark, MD, Kerry Monaghan, BS, and Marcos F. Barnatan, MD

864 **Treating Aortic Dissection and Penetrating Aortic Ulcer with Stent Graft: Thirty Cases**
Shang Dong Xu, MD, Zhi Zhong Li, MD, Fang Jiong Huang, MD, Jin Fei Yang, MD, Xue Yong Wang, MD, Zhao Guang Zhang, MD, Jia Hui Du, MD, and Yan Qing Sun, MD

Invited Commentary
Martin Czerny, MD

870 **Optimized Biventricular Pacing in Atrioventricular Block After Cardiac Surgery**
George Berberian, MD, T. Alexander Quinn, MS, Joshua P. Kanter, MD, Lauren J. Curtis, BA, Santos E. Cabreriza, MBA, Alan D. Weinberg, MS, and Henry M. Spotnitz, MD

876 **A Multi-Institutional Experience With the CryoMaze Procedure**
James S. Gammie, MD, John C. Laschinger, MD, James M. Brown, MD, Robert S. Poston, MD, Richard N. Pierson III, MD, Linda G. Romar, BSN, Kimberly L. Schwartz, MBA, Mary J. Santos, PA-C, and Bartley P Griffith, MD

881 **Post-Mortem Histologic Evaluation of Microwave Lesions After Epicardial Pulmonary Vein Isolation for Atrial Fibrillation**
Ryan E. Accord, MD, Robert-Jan van Suylen, MD, PhD, Thomas J. van Brakel, MD, and Jos G. Maessen, MD, PhD

Invited Commentary
Stuart P. Thomas, BMed, PhD

888 **Single Versus Bilateral Internal Mammary Artery for Isolated First Myocardial Revascularization in Multivessel Disease: Long-Term Clinical Results in Medically Treated Diabetic Patients**
Antonio Maria Calafiore, MD, Michele Di Mauro, MD, Gabriele Di Giammarco, MD, Giovanni Teodori, MD, Angela Lorena Iacò, MD, Valerio Mazzei, MD, Giuseppe Vitolla, MD, and Marco Contini, MD

896 **Do Angiographic Results From Symptom-Directed Studies Reflect True Graft Patency?**
Brian F. Buxton, FRACS, Manoj Durairaj, MCh, David L. Hare, FRACP, Ian Gordon, PhD, Simon Moten, FRACS, Victoria Orford, FRACS, and Siven Seevanayagam, FRACS

902 **Implementing Tight Glucose Control After Coronary Artery Bypass Surgery**
Justine M. Carr, MD, Frank W. Sellke, MD, Michelle Fey, NP, Mathew J. Doyle, MA, Judy A. Krempin, MS, Ralph de la Torre, MD, and John R. Liddicoat, MD

910 **Examination of the Use of Cognitive Domains in Postoperative Cognitive Dysfunction After Coronary Artery Bypass Graft Surgery**
Matthew S. Lewis, BAppSc Hons, Paul T. Maruff, PhD, and Brendan S. Silbert, MBBS, FANZCA

Invited Commentary
David C. Bellinger, PhD, MS

918 **Long-Term Physical Activity and Neurologic Function After Harvesting of the Radial Artery as T-Graft or Free Graft in Coronary Revascularization**
Karsten Knobloch, MD, Artur Lichtenberg, MD, Sandra Tomaszek, Christian Hagl, MD, Nawid Khaladj, MD, Uwe Klima, MD, PhD, and Axel Haverich, MD, PhD

922 **Aprotinin Reduces Bleeding and Blood Product Use in Patients Treated With Clopidogrel Before Coronary Artery Bypass Grafting**
Gabriella Lindvall, MD, Ulrik Sartipy, MD, and Jan van der Linden, MD, PhD

928 **Clopidogrel and Bleeding After Coronary Artery Bypass Graft Surgery**
Jee-Yoong Leong, MBBS, Robert A. Baker, PhD, Pallav J. Shah, MCh, Vijit K. Cherian, MCh, and John L. Knight, FRACS

934 **Harmonic Scalpel Reduces Bleeding and Postoperative Complications in Redo Cardiac Surgery**
Nicola Luciani, MD, Amedeo Anselmi, MD, Mario Gaudino, MD, Giuseppe Nasso, MD, Franco Glieca, MD, Lorenzo Martinelli, MD, Filippo Santarelli, MD, Mario Perisano, MD, and Gianfederico Possati, MD

939 **Effect of Vein Graft Harvesting on Endothelial Nitric Oxide Synthase and Nitric Oxide Production**
Michael R. Dashwood, PhD, Kay Savage, PhD, Audrey Dooley, PhD, Xu Shi-Wen, PhD, David J. Abraham, PhD, and Domingos S. R. Souza, MD, PhD

945 **Human Leukocyte Antigen Sensitization in Ventricular Assist Device Recipients: A Lesser Risk With the DeBakey Axial Pump**
Jean-Michel Grinda, MD, Marie-Odile Bricourt, MD, Catherine Amrein, MD, Suzanne Salvi, MD, Romain Guillemain, MD, Anne Francois, MD, Pierre Guibourt, MD, Alain Deloche, MD, and Jean-Noel Fabiani, MD

Invited Commentary
William L. Holman, MD

950 **Poly (ADP) Ribose Polymerase Inhibition Improves Rat Cardiac Allograft Survival**
Alexander S. Farivar, MD, Anton S. McCourtie, MRCS, Brendan C. MacKinnon-Patterson, BS, Steven M. Woolley, MRCS, Andrew D. Barnes, PharmD, Min Chen, MD, PhD, Prakash Jagtap, PhD, Csaba Szabó, MD, PhD, Christopher T. Salerno, MD, PhD, and Michael S. Mulligan, MD

957 **Deep Sternal Wound Infection After Cardiac Surgery: Modality of Treatment and Outcome**
Franz F. Immer, MD, Martina Durrer, MD, Kathrin S. Mühlemann, MD, PhD, Dominique Erni, MD, Brigitta Gahl, MCS, and Thierry P. Carrel, MD

962 **In Vitro Comparison of Wire and Plate Fixation for Midline Sternotomies**
Shruti Pai, BS, Najmuddin J. Gunja, BS, Erin L. Dupak, BS, Nicole L. McMahon, BS, Timothy P. Roth, MS, Janice F. Lalikos, MD, Raymond M. Dunn, MD, Nicola Francalancia, MD, George D. Pins, PhD, and Kristen L. Billiar, PhD

Invited Commentary
Julian E. Losanoff, MD

969 **Advances in Experimental Percutaneous Pulmonary Valve Replacement**
Tim Attmann, MD, Thomas Jahnke, MD, René Quaden, MD, Andreas Boening, MD, PhD, Stefan Muller-Hulsbeck, MD, PhD, Jochen Cremer, MD, PhD, and Georg Lutter, MD, PhD

Invited Commentary
Antonio F. Corno, MD

976 **Appropriate Additional Pulmonary Blood Flow at the Bidirectional Glenn Procedure is Useful for Completion of Total Cavopulmonary Connection**
Masahiro Yoshida, MD, Masahiro Yamaguchi, MD, PhD, Naoki Yoshimura, MD, PhD, Hirohisa Murakami, MD, PhD, Hironori Matsuhisa, MD, and Yutaka Okita, MD, PhD

Invited Commentary
David N. Campbell, MD

982 **Randomized Comparison Between Normothermic and Hypothermic Cardiopulmonary Bypass in Pediatric Open-Heart Surgery**
Massimo Caputo, MD, Simon Bays, FRCS, Chris A. Rogers, PhD, Ash Pawade, FRCS, Andrew J. Parry, FRCS, Saadeh Suleiman, PhD, and Gianni D. Angelini, FRCS

989 **Blood Cardioplegia Provides Superior Protection in Infant Cardiac Surgery**
Kerstin Åmark, MD, Håkan Berggren, MD, PhD, Kerstin Björk, CCP, Annica Ekroth, CCP, Rolf Ekroth, MD PhD, Krister Nilsson, MD PhD, and Jan Sunnegårdh, MD, PhD

995 **Enhanced Aortic Pressure Wave Reflection in Patients After Repair of Aortic Coarctation**
Tomoaki Murakami, MD, PhD, and Atsuhito Takeda, MD, PhD

Invited Commentary
Kirk Kanter, MD

ORIGINAL ARTICLES: GENERAL THORACIC

1001 **Locally Recurrent Esophageal Carcinoma: When is Re-Resection Indicated?**
Paul H. Schipper, MD, Stephen D. Cassivi, MD, Claude Deschamps, MD, David C. Rice, MD, Francis C. Nichols III, MD, Mark S. Allen, MD, and Peter C. Pairolero, MD

1007 **Deregulated $p21^{WAF1}$ Overexpression Impacts Survival of Surgically Resected Esophageal Squamous Cell Carcinoma Patients**
Yih-Gang Goan, MD, Hon-Ki Hsu, MD, Huang-Chou Chang, MD, Yi-Ping Chou, MD, Ke-Hsin Chiang, MD, and Jiin-Tsuey Cheng, PhD

1017 **Intercostal Muscle Flap to Buttress the Bronchus at Risk and the Thoracic Esophageal-Gastric Anastomosis**
Robert James Cerfolio, MD, FACS, Ayesha S. Bryant, MSPH, and Masumi Yamamuro, MD

1021 **Proper Treatment Selection May Improve Survival in Patients With Clinical Early-Stage Nonsmall Cell Lung Cancer**
Özcan Birim, MD, A. Pieter Kappetein, MD, PhD, Tom Goorden, MD, Rob J. van Klaveren, MD, PhD, and Ad J. J. C. Bogers, MD, PhD

Invited Commentary
Hans G. Fieguth, MD

1028 **Expression of Bone Morphogenetic Proteins in Human Lung Carcinomas**
Elaine M. Langenfeld, BS, John Bojnowski, BS, John Perone, MD, and John Langenfeld, MD

Invited Commentary
Akira Iyoda, MD, PhD

1033 Alcohol Abuse Predicts Progression of Disease and Death in Patients with Lung Cancer
Douglas E. Paull, MD, Glenda M. Updyke, PA-C, Michael A. Baumann, MD, Hong W. Chin, MD, Alex G. Little, MD, and Samuel A. Adebonojo, MD

1040 Predictive Factors for Local Recurrence of Resected Colorectal Lung Metastases
Satoshi Shiono, MD, Genichiro Ishii, MD, Kanji Nagai, MD, Junji Yoshida, MD, Mitsuyo Nishimura, MD, Yukinori Murata, MT, Koji Tsuta, MD, Young Hak Kim, MD, Yutaka Nishiwaki, MD, Tetsuro Kodama, MD, Motoki Iwasaki, MD, and Atsushi Ochiai, MD

1046 Can Surgery for Cancer Accelerate the Progression of Secondary Tumors Within Residual Minimal Disease at Both Local and Systemic Levels?
Syed S. A. Qadri, FRCSI, Jiang-Huai Wang, PhD, J. C. Coffey, AFRCSI, PhD, Mahmood Alam, FRCSI, Aonghus O'Donnell, FRCSI, Thomas Aherne, FRCSI, and Henry P. Redmond, FRCSI, MCh

1052 Alternate Suction Reduces Prolonged Air Leak After Pulmonary Lobectomy: A Randomized Comparison Versus Water Seal
Alessandro Brunelli, MD, Armando Sabbatini, MD, Francesco Xiume', MD, Majed Al Refai, MD, Michele Salati, MD, and Rita Marasco, MD

Invited Commentary
M. Blair Marshall, MD

1056 Prognostic Factors in Thymic Epithelial Tumors Undergoing Complete Resection
Charalambos Zisis, MD, Dimitra Rontogianni, MD, Chara Tzavara, MD, Kalliopi Stefanaki, MD, Antonios Chatzimichalis, MD, Antonios Loutsidis, MD, Kosmas Iliadis, MD, Argirios Kontaxis, MD, Theodosios Dosios, MD, PhD, and Ion Bellenis, MD

1063 Clinical Experience in 397 Consecutive Thoracoscopic Sympathectomies
King F. Kwong, MD, Lindsay B. Cooper, BS, Leslie A. Bennett, RN, BSN, Whitney Burrows, MD, Ziv Gamliel, MD, and Mark J. Krasna, MD

1067 Clinical Profile and Surgical Outcome for Pulmonary Aspergilloma: A Single Center Experience
Jayesh Gopal Akbari, MS, Praveen Kerala Varma, MCh, Praveen Kumar Neema, MD, Madathipatt Unnikrishnan Menon, MCh, and Kurur Sankaran Neelakandhan, MCh

1073 Analysis of the Nuss Procedure for Pectus Excavatum in Different Age Groups
Do Hyung Kim, MD, Jung Joo Hwang, MD, Mi Kyeong Lee, RN, Doo Yun Lee, MD, and Hyo Chae Paik, MD

1078 Unnoticed Glove Perforation During Thoracoscopic and Open Thoracic Surgery
Yuko Kojima, MD, and Masahiko Ohashi, MD

NEW TECHNOLOGY

1081 Epicardial Maze Procedure on the Beating Heart With an Infrared Coagulator
Hiroshi Kubota, MD, Shinichi Takamoto, MD, Akira Furuse, MD, Masaya Sato, MD, Hidehito Endo, MD, Tatsuo Fujiki, MD, and Kenichi Sudo, MD

Invited Commentary
Miralem Pasic, MD, PhD, and Roland Hetzer, MD, PhD

1087 Combined Surgical and Endovascular Treatment of Aortic Type A Dissection
Aristotelis Panos, MD, Afksendiyos Kalangos, MD, Panayiotis Christofilopoulos, MD, and Gregory Khatchatourian, MD

Invited Commentary
Enio Buffolo, MD, PhD

1091 Evaluation of the Enclose Proximal Anastomosis Device in Coronary Artery Bypass Grafting
Sary F. Aranki, MD, Prem S. Shekar, MD, Afshin Ehsan, MD, Margaretta Byrne-Taft, MPH, and Gregory S. Couper, MD

CASE REPORTS

e-Only Content

e-8 Left Atrial Extension of a Wilms' Tumor
Gonçalo F. Coutinho, MD, Fátima Heitor, MD, Pedro E. Antunes, MD, and Manuel J. Antunes, MD, PhD

1096 Combined Myocardial and Mesenteric Surgical Revascularization
Michel Kindo, MD, Arnaud Mommerot, MD, Guillaume Maxant, MD, Georges Giron, MD, Mario Arguello, MD, and Bernard Eisenmann, MD

1098 Symptoms Plus Family History Trump Size in Thoracic Aortic Aneurysm
John A. Elefteriades, MD, Maryann Tranquilli, RN, Umer Darr, MD, James Cardon, MD, B-Q Zhu, MD, and Peter Barrett, MD

1100 Robotic Resection of an Aortic Valve Papillary Fibroelastoma
Y. Joseph Woo, MD, Todd J. Grand, BS, and Stuart J. Weiss, MD, PhD

1103 Adhesiolysis is Facilitated by Robotic Technology in Reoperative Cardiac Surgery
Timothy P. Martens, MD, Jeffrey A. Morgan, MD, Marco M. Hefti, BA, David A. Brunacci, BS, Faisal H. Cheema, MD, Satish K. Kesava, MD, Steve Xydas, MD, Nick C. Dang, MD, Deon W. Vigilance, MD, Takushi Kohmoto, MD, Lyall A. Gorenstein, MD, Craig R. Smith, Jr, MD, and Michael Argenziano, MD

1105 Excision of a Mediastinal Parathyroid Adenoma After Coronary Artery Bypass Surgery
Harold L. Lazar, MD, Elizabeth Oates, MD, and Robert M. Beazley, MD

1106 Spontaneous Rupture of Left Ventricular True Aneurysm
Hung-Hsing Chao, MD, Ming-Jen Lu, MD, and Chi-Ren Hung, MD

1108 Innovative Use of Octopus IV Stabilizer in Cardiac Trauma
Paul D. Waterworth, FRCS, Ghasan Musleh, FRCS, Donna Greenhalgh, FRCA, and Andrew Tsang, MRCS

1110 Ross Procedure in a Quadricuspid Aortic Valve
Martin Misfeld, MD, Felix Christiansen, MD, and Hans-H. Sievers, MD

1111 Cleft Mitral Valve in Association With Anomalous Left Coronary Artery Arising From Pulmonary Artery
Sridhar Rathinam, FRCS, Oliver Stümper, MD, PhD, William J. Brawn, FRCS, FRACS, and David J. Barron, MD, FRCS (C Th)

1113 Anomalous Hepatic Venous Drainage
Georgios P. Georghiou, MD, Eldad Erez, MD, Elchanan Bruckheimer, MBBS, Ovadia Dagan, MD, Bernardo A. Vidne, MD, and Einat Birk, MD

1115 Hyperbaric Oxygen Treatment of Hemorrhagic Radiation-Induced Gastritis After Esophagectomy
Kemp H. Kernstine, MD, PhD, J. Eric Greensmith, MD, PhD, Frederick C. Johlin, MD, Gerry F. Funk, MD, Daniel T. De Armond, MD, Timothy L. Van Natta, MD, and Daniel J. Berg, MD

1117 Successful Treatment of an Aortoesophageal Fistula After Emergency Endovascular Thoracic Aortic Stent-Graft Placement
Martin Czerny, MD, Daniel Zimpfer, MD, Tatjana Fleck, MD, Roman Gottardi, MS, Manfred Cejna, MD, Maria Schoder, MD, Johannes Lammer, MD, Ernst Wolner, MD, Martin Grabenwoger, MD, and Michael-Rolf Mueller, MD

1120 Fatal Esophageal Perforation Caused by Invasive Candidiasis
Michael Gock, MD, Markus Schäfer, MD, Aurel Perren, MD, Nicolas Demartines, MD, and Pierre-Alain Clavien, MD, PhD

1122 Esophageal Replacement by Lexer's Esophagoplasty: Adenocarcinoma as Late Complication
Alexander R. Novotny, MD, Gerd Florack, MD, Karen Becker, MD, and Jorg-Rudiger Siewert, MD, PhD

1124 Postoperative Pleural Effusion in Bronchioloalveolar Cancer
Natalie D. Shaw, BS, and Eddie L. Hoover, MD

1126 Dieulafoy's Disease: A Cause of Massive Hemoptysis That is Probably Underdiagnosed
Akın Kuzucu, MD, İclal Gürses, MD, Ömer Soysal, MD, Ramazan Kutlu, MD, and Mehmet Özgel, MD

1129 Two-Year Survival After Multiple Bilateral Lung Metastasectomies for Cranial Meningioma
Massimiliano D'Aiuto, MD, Giulia Veronesi, MD, Giuseppe Pelosi, MD, Pietro Fabio Presicci, MD, Giorgio Maria Ferraroli, MD, Robero Gasparri, MD, and Lorenzo Spaggiari, MD, PhD

1131 Structural Allograft Implantation for Thoracic Spinal Impalement
Chiung-Lun Kao, MD, and Jen-Ping Chang, MD

IMAGES IN CARDIOTHORACIC SURGERY

1133 Swan-Ganz Monitoring of the AbioCor Artificial Heart
Louis E. Samuels, MD, Elena C. Holmes, CRNP, and John C. Entwistle III, MD, PhD

1134 Unusual Chest Lesion: Giant Primary Pulmonary Lymphoma
Nick Dobrilovic, MD, Creighton B. Wright, MD, S. Russell Vester, MD, Manisha A. Patel, MD, and Elizabeth A. Fannin, BA

HOW TO DO IT

1135 Commissural Closure for Repair of Mitral Commissural Prolapse
A. Marc Gillinov, MD, Kevin G. Shortt, MD, and Delos M. Cosgrove III, MD

1137 Safe Coronary Artery Occlusion With a New Tourniquet in Off-Pump Bypass Grafting
Hirokuni Arai, MD, PhD, Keiji Oi, MD, Hiroyuki Tanaka, MD, PhD, Noriyuki Tabuchi, MD, PhD, and Makoto Sunamori, MD, PhD

1140 **Modified Septosuperior Approach for the Repair of Supracardiac Total Anomalous Pulmonary Venous Return in Infants**
Komarakshi R. Balakrishnan, MD, and Usha Parvathy, MD

1143 **A Median Sternotomy Approach to Right Extrapleural Pneumonectomy for Mesothelioma**
Antonio E. Martin-Ucar, FRCS Ed, Duncan J. Stewart, FRCS, Kevin J. West, FRCA, and David A. Waller, FRCS(CTh)

REVIEWS

1146 **Implementation of a Cardiac Surgery Report Card: Lessons From the Massachusetts Experience**
David M. Shahian, MD, David F. Torchiana, MD, and Sharon-Lise T. Normand, PhD

1151 **Prosthetic Valve Endocarditis**
Balakrishnan Mahesh, MS, FRCS, Gianni Angelini, FRCS, Massimo Caputo, MD, Xu Yu Jin, PhD, and Alan Bryan, FRCS

CORRESPONDENCE

1159 **Conflict of Interest Disclosure**
Walter Fürst, MS, and Heinz Redl, PhD

1159 **Distal Aortic Perfusion During Aortic Arch Repair**
Hisato Takagi, MD, PhD, and Yukihiro Matsuno, MD, PhD

Reply
Charles T. Klodell, MD

1160 **Repair of Anomalous Origin of Right Pulmonary Artery From Ascending Aorta: Double Trap-Door or Double-Flap?**
Khanh H. Nguyen, MD

1160 **Compensatory Sweating After Thoracoscopic Sympathectomy Deserves More Attention**
Min-Huei Hsu, MD, and Yu-Chuan Li, MD, PhD

Reply
Pascal Dumont, MD

1161 **Compensatory Hyperhidrosis after Thoracoscopic Sympathectomy**
Fritz Baumgartner, MD

Reply
Pascal Dumont, MD

ANNOUNCEMENTS

A-36 **Information for Authors**

A-41 **Guidelines for Reviewers**

A-43 **Conditions for Publication Form**

A-45 **Events of Interest**

831 **Online Discussion Forum**

844 **The Thoracic Surgery Foundation for Research and Education**

850 **Requirements for Recertification/ Maintenance of Certification in 2006**

901 **Notice From the American Board of Thoracic Surgery Regarding Trainees and Candidates for Certification Who Are Called to Military Service Related to the War on Terrorism**

956 **Notice From the American Board of Thoracic Surgery**

1016 **Southern Thoracic Surgical Association: Fifty-Second Annual Meeting**

1027 **The Society of Thoracic Surgeons: Forty-Second Annual Meeting**

1062 **The Society of Thoracic Surgeons Policy Action Center**

1072 **Member and Individual Subscriber Access to the Onine *Annals***

1162 **Program for the Southern Thoracic Surgical Association Fifty-Second Annual Meeting**

A-49 **Classified Advertisements**

A-63 **Index to Advertisers**

Number 4 October 2005

THE STATISTICIAN'S PAGE

1169 **Statistical Techniques for Validating Logistic Regression Models**
William N. Anderson, PhD

ORIGINAL ARTICLES: GENERAL THORACIC

1170 **Adjuvant Chemotherapy with 5-Fluorouracil and Cisplatin in Lymph Node-Positive Thoracic Esophageal Squamous Cell Carcinoma**
Jeeyun Lee, MD, Kyoung-Eun Lee, MD, Young-Hyuck Im, MD, Won Ki Kang, MD, Keunchil Park, MD, Kwhanmien Kim, MD, and Young Mog Shim, MD

1176 **Induction Chemoradiotherapy for Squamous Cell Carcinoma of the Thoracic Esophagus: Impact of Increased Dosage on Long-Term Results**
Giovanni de Manzoni, MD, Corrado Pedrazzani, MD, Ernesto Laterza, MD, Felice Pasini, MD, Antonio Grandinetti, MD, Marco Bernini, MD, Andrea Ruzzenente, MD, Germana Zerman, MD, Anna Tomezzoli, MD, and Claudio Cordiano, MD

Invited Commentary
Jeffrey M. Piehler, MD

1185 **Intrathoracic Manifestations of Cervical Anastomotic Leaks After Transthoracic Esophagectomy for Carcinoma**
Robert J. Korst, MD, Jeffrey L. Port, MD, Paul C. Lee, MD, and Nasser K. Altorki, MD

1191 **Laparoscopic Esophageal Myotomy for Achalasia: Factors Affecting Functional Results**
Subrato Deb, MD, Claude Deschamps, MD, Mark S. Allen, MD, Francis C. Nichols III, MD, Stephen D. Cassivi, MD, Brian S. Crownhart, BS, and Peter C. Pairolero, MD

1196 **Laparoscopic Transhiatal Subtotal Esophagectomy for the Treatment of Advanced Megaesophagus**
Eduardo Crema, PhD, MD, Lara B. P. Ribeiro, Juverson A. Terra, Jr, and Alex A. Silva, MD

1202 **Robotic-Assisted Thoracoscopic Surgery (RATS) for Benign and Malignant Esophageal Tumors**
Johannes C. Bodner, MD, Matthias Zitt, MD, Harald Ott, MD, Gerold J. Wetscher, MD, Heinz Wykypiel, MD, Paolo Lucciarini, MD, and Thomas Schmid, MD

1207 **Improving the Inaccuracies of Clinical Staging of Patients with NSCLC: A Prospective Trial**
Robert James Cerfolio, MD, FACS, Ayesha S. Bryant, MD, MSPH, Buddhiwardhan Ojha, MD, MPH, and Mohammad Eloubeidi, MD

1215 **Cost Effectiveness of Chest Computed Tomography After Lung Cancer Resection: A Decision Analysis Model**
Michael S. Kent, MD, Peter Korn, MD, Jeffrey L. Port, MD, Paul C. Lee, MD, Nasser K. Altorki, MD, and Robert J. Korst, MD

1224 **Pulmonary Resection After High-Dose and Low-Dose Chest Irradiation**
Robert James Cerfolio, MD, Ayesha S. Bryant, MD, MSPH, Sharon A. Spencer, MD, MPH, and Alfred A. Bartolucci, PhD

1231 **Endoscopic Ultrasound-Guided Fine-Needle Aspiration in Patients With Non-Small Cell Lung Cancer and Prior Negative Mediastinoscopy**
Mohamad A. Eloubeidi, MD, MHS, Ashutosh Tamhane, MD, MSPH, Victor K. Chen, MD, MSPH, and Robert J. Cerfolio, MD

Invited Commentary
Sudish Murthy, MD, PhD

1241 **Can We Improve the Cytologic Examination of Malignant Pleural Effusions Using Molecular Analysis?**
Malcolm V. Brock, MD, Craig M. Hooker, MPH, Rex Yung, MD, Mingzhou Guo, MD, PhD, Yu Han, BS, Stephen E. Ames, BS, David Chang, PhD, Stephen C. Yang, MD, David Mason, MD, Marc Sussman, MD, Stephen B. Baylin, MD, and James G. Herman, MD

1248 **Primary Pulmonary Lymphoma**
Brian B. Graham, MD, Douglas J. Mathisen, MD, Eugene J. Mark, MD, and Ronald W. Takvorian, MD

1254 Prevalence of Gastroesophageal Reflux in End-Stage Lung Disease Candidates for Lung Transplant
Frank D'Ovidio, MD, PhD, Lianne G. Singer, MD, Denis Hadjiliadis, MD, Andrew Pierre, MD, Thomas K. Waddell, PhD, Marc de Perrot, MD, Micheal Hutcheon, MD, Linda Miller, RN, Gail Darling, MD, and Shaf Keshavjee, MD

Invited Commentary
R. Duane Davis, MD

1262 Radioguided Thoracoscopic Mediastinal Parathyroidectomy With Intraoperative Parathyroid Hormone Testing
Tracey L. Weigel, MD, Jennifer Murphy, MD, Loay Kabbani, MD, Anna Ibele, MD, and Herbert Chen, MD

1266 Video-Assisted Thoracoscopic Surgery for Pulmonary Sequestration in Children
Pascal de Lagausie, MD, PhD, Arnaud Bonnard, MD, Dominique Berrebi, MD, PhD, Philippe Petit, MD, Sophie Dorgeret, MD, and Jean Michel Guys, MD

1270 The Impact of Vacuum-Assisted Closure on Long-Term Survival After Post-Sternotomy Mediastinitis
Johan Sjögren, MD, PhD, Johan Nilsson, MD, Ronny Gustafsson, MD, PhD, Malin Malmsjö, MD, PhD, and Richard Ingemansson, MD, PhD

1276 Extended Indications for Percutaneous Tracheostomy
Alon Ben Nun, MD, PhD, Eduard Altman, MD, and Lael Anson Best, MD

ORIGINAL ARTICLES: CARDIOVASCULAR

1280 Strategies to Manage Paraplegia Risk After Endovascular Stent Repair of Descending Thoracic Aortic Aneurysms
Albert T. Cheung, MD, Alberto Pochettino, MD, Michael L. McGarvey, MD, Jehangir J. Appoo, MD, Ronald M. Fairman, MD, Jeffrey P. Carpenter, MD, William G. Moser, RN, Edward Y. Woo, MD, and Joseph E. Bavaria, MD

1290 Descending Thoracic Aortic Aneurysm Repair: 12-Year Experience Using Distal Aortic Perfusion and Cerebrospinal Fluid Drainage
Anthony L. Estrera, MD, Charles C. Miller III, PhD, Edward P. Chen, MD, Riad Meada, MD, Ricardo H. Torres, DO, Eyal E. Porat, MD, Tam T. Huynh, MD, Ali Azizzadeh, MD, and Hazim J. Safi, MD

1297 Long-Term Effectiveness of Total Arch Replacement for Type A Aortic Dissection
Yoshie Ochiai, MD, Yutaka Imoto, MD, Masato Sakamoto, MD, Yasutaka Ueno, MD, Tetsuro Sano, MD, Hironori Baba, MD, and Akira Sese, MD

Invited Commentary
Walter J. Gomes, MD, PhD

1303 Endovascular Aortic Clamping for Pseudoaneurysms of the Aortic Root With Aortic Regurgitation
Daniele Maselli, MD, Gianluca Santise, MD, Andrea Montalto, MD, and Francesco Musumeci, MD

1309 Isolated Mitral Valve Repair in Patients With Depressed Left Ventricular Function
Ashish S. Shah, MD, Steven A. Hannish, MD, Carmelo A. Milano, MD, and Donald D. Glower, MD

1315 Edge-to-Edge Repair With Mitral Annuloplasty for Barlow's Disease
Mehmet Oc, MD, George Doukas, FRCSI, Christos Alexiou, FRCS, PhD, Bahar Oc, MD, Leon Hadjinikolaou, MD, Andrzej W. Sosnowski, MD, FRCS, and Tomasz J. Spyt, FRCS(CTh), MD

1319 Rest and Exercise Performance of the Medtronic Advantage Bileaflet Valve in the Aortic Position
Ralf Guenzinger, MD, Walter B. Eichinger, MD, Florian Botzenhardt, MD, Sabine Bleiziffer, MD, Ina Wagner, MD, Robert Bauernschmitt, MD, PhD, Stephen M. Wildhirt, MD, PhD, and Ruediger Lange, MD, PhD

Invited Commentary
Willem Flameng, MD, PhD

1327 Neurocognitive Functioning in Patients Undergoing Coronary Artery Bypass Graft Surgery or Percutaneous Coronary Intervention: Evidence of Impairment Before Intervention Compared With Normal Controls
Todd K. Rosengart, MD, Jerry Sweet, MD, Eileen B. Finnin, RN, Penny Wolfe, PhD, John Cashy, PhD, Elizabeth Hahn, MA, Jesse Marymont, MD, and Timothy Sanborn, MD

1336 Redo Minimally Invasive Direct Coronary Artery Bypass Grafting
Stephan Jacobs, MD, David Holzhey, MD, Thomas Walther, MD, PhD, Volkmar Falk, MD, PhD, and Friedrich W. Mohr, MD, PhD

1340 **Percutaneous Intervention Versus Coronary Bypass Surgery for Patients Older Than 70 Years of Age With High-Risk Unstable Angina**
Kodangudi B. Ramanathan, MD, FACC, Darryl S. Weiman, MD, JD, Jerome Sacks, PhD, Douglass A. Morrison, MD, FACC, Steven Sedlis, MD, FACC, Gulshan Sethi, MD, FACC, and William G. Henderson, PhD

1347 **C-Type Natriuretic Peptide Relaxes Human Coronary Artery Bypass Grafts Preconstricted by Endothelin-1**
Christopher J. Kelsall, PhD, Adrian H. Chester, PhD, Mohammed Amrani, FRCS, and Donald R. J. Singer, MD

Invited Commentary
Giulio Pompilio, MD, PhD, and Luigi Sironi, PhD

1353 **Does Diabetes Affect the Postoperative Outcomes After Total Arterial Off-Pump Coronary Bypass Surgery in Multivessel Disease?**
Jae-Sung Choi, MD, PhD, Kwang Ree Cho, MD, and Ki-Bong Kim, MD, PhD

Invited Commentary
Louis P. Perrault, MD, PhD

1362 **Time-Dependent Regional Myocardial Denervation as a Nonspecific Response to Transmyocardial Laser Revascularization**
Tomohiro Asai, MD, Shu Yamamoto, MD, Kozo Ishino, MD, Takushi Kohmoto, MD, Mitsuhito Kuriyama, MD, Gentaro Kato, MD, Yu Oshima, MD, Noriyoshi Yamamoto, MD, Kenji Notohara, MD, Shigeru Okada, MD, and Shunji Sano, MD

Invited Commentary
Johan F. Beek, MD, PhD, and Jos A.P. van der Sloot, MD, PhD

1371 **Serum S-100 β Protein During Coronary Artery Bypass Graft Surgery With or Without Cardiopulmonary Bypass**
Kuan-Jen Wang, MD, Hsiang-Hua Wu, BA, Shih-Yuan Fang, MD, Yu-Ren Yang, MD, PhD, and A. Chia-Chih Tseng, MD

1375 **The Arterial Sling Operation: One-Year Follow-Up**
Imran Parvaiz, MD, Jens T. Lund, MD, and Henning Kelbæk, MD

1381 **Low Hematocrit During Cardiopulmonary Bypass is Associated With Increased Risk of Perioperative Stroke in Cardiac Surgery**
Keyvan Karkouti, MD, George Djaiani, MD, Michael A. Borger, MD, PhD, William S. Beattie, MD, PhD, Ludwik Fedorko, MD, PhD, Duminda Wijeysundera, MD, Joan Ivanov, PhD, and Jacek Karski, MD

1388 **Does the Combination of Aprotinin and Angiotensin-Converting Enzyme Inhibitor Cause Renal Failure After Cardiac Surgery?**
Edward H. Kincaid, MD, David A. Ashburn, MD, John R. Hoyle, MD, Marc G. Reichert, PharmD, John W. Hammon, MD, and Neal D. Kon, MD

1394 **Effects of a Leukocyte Depleting Arterial Line Filter on Perioperative Morbidity in Patients Undergoing Cardiac Surgery: A Controlled Randomized Trial**
Santiago R. Leal-Noval, MD, PhD, Rosario Amaya, MD, PhD, Angel Herruzo, MD, Ana Hernández, MD, PhD, Antonio Ordóñez, MD, PhD, Ana Marín-Niebla, MD, and Pedro Camacho, MD

1401 **Cerebral Physiology of Cardiac Surgical Patients Treated with the Perfluorocarbon Emulsion, AF0144**
Steven E. Hill, MD, Hilary P. Grocott, MD, FRCPC, Bruce J. Leone, MD, William D. White, MPH, Mark F. Newman, MD, and the Neurologic Outcome Research Group of the Duke Heart Center

1408 **Multiple Treatment Approach to Limit Cardiac Ischemia-Reperfusion Injury**
James E. Davies, MD, Stanley B. Digerness, PhD, Cheryl R. Killingsworth, DVM, PhD, Corinne Zaragoza, MS, Charles R. Katholi, PhD, Robert K. Justice, PhD, Steven P. Goldberg, MD, and William L. Holman, MD

Invited Commentary
Robert M. Mentzer, Jr, MD

1417 **En Bloc Exclusion of the Pulmonary Vein Region in the Pig Using Off Pump, Beating, Intra-Cardiac Surgery: A Pilot Study of Minimally Invasive Surgery for Atrial Fibrillation**
Gerard M. Guiraudon, MD, Douglas L. Jones, MD, PhD, Allan C. Skanes, MD, Daniel Bainbridge, MD, Colette M. Guiraudon, MD, Steen M. Jensen, MD, PhD, Xiaping Yuan, MD, Maria Drangova, MD, PhD, and Terry M. Peters, MD, PhD

1424 **Septal Myectomy for Obstructive Hypertrophic Cardiomyopathy in Pediatric Patients: Early and Late Results**
Kenji Minakata, MD, Joseph A. Dearani, MD, Patrick W. O'Leary, MD, and Gordon K. Danielson, MD

1431 **Tetralogy of Fallot: Results of a Pulmonary Valve-Sparing Strategy**
Robert D. Stewart, MD, MPH, Carl L. Backer, MD, Luciana Young, MD, and Constantine Mavroudis, MD

1440 **Dual Chamber Epicardial Pacing for the Failing Atriopulmonary Fontan Patient**
Ali Dodge-Khatami, MD, PhD, Mariette Rahn, MD, René Prêtre, MD, and Urs Bauersfeld, MD

1445 **Salvaging the Failing Fontan: Lateral Tunnel Versus Extracardiac Conduit**
David L. S. Morales, MD, Daniel J. Dibardino, MD, Brandi E. Braud, Arnold L. Fenrich, MD, Jeffrey S. Heinle, MD, William K. Vaughn, PhD, E. Dean McKenzie, MD, and Charles D. Fraser, Jr, MD

1453 **Extended Resection and End-to-End Anastomosis for Aortic Coarctation in Infants: Results of a Tailored Surgical Approach**
Gail E. Wright, MD, Cheryl A. Nowak, RN, Caren S. Goldberg, MD, Richard G. Ohye, MD, Edward L. Bove, MD, and Albert P. Rocchini, MD

1460 **Specific Bypass Conditions Determine Safe Minimum Flow Rate**
Vesa Anttila, MD, Ikuo Hagino, MD, David Zurakowski, PhD, Yusuke Iwata, MD, Lennart Duebener, MD, Hart G. W. Lidov, MD, and Richard A. Jonas, MD

Invited Commentary
Markus K. Heinemann, MD, PhD

1468 **Patterns of Lactate Values after Congenital Heart Surgery and Timing of Cardiopulmonary Support**
Robert L. Hannan, MD, Marion A. Ybarra, BS, Jeffrey A. White, MS, Jorge W. Ojito, CCP, Anthony F. Rossi, MD, and Redmond P. Burke, MD

NEW TECHNOLOGY

1475 **A Less Invasive Approach to Completely Repair the Aortic Arch**
Thierry P. Carrel, MD, Dai-Do Do, MD, Jürgen Triller, MD, and Jürg Schmidli, MD

Invited Commentary
Eugenio Neri, MD

1479 **Non-Invasive Cardiac Output Determination by Two-Dimensional Independent Doppler During and After Cardiac Surgery**
Karsten Knobloch, MD, Artur Lichtenberg, MD, Michael Winterhalter, MD, Dagmar Rossner, MD, Max Pichlmaier, MD, and Rob Phillips, MD

Invited Commentary
Robert Savage, MD, and Lars G. Svensson, MD, PhD

1485 **Microdebrider Bronchoscopy: A New Tool for the Interventional Bronchoscopist**
William Lunn, MD, Robert Garland, RRT, Simon Ashiku, MD, Robert L. Thurer, MD, David Feller-Kopman, MD, and Armin Ernst, MD

Invited Commentary
Robert J. Downey, MD

CASE REPORTS

e-Only Content

e10 **Giant Fibrolipoma in the Mediastinum: An Unusual Case**
Jui-Sheng Hsu, MD, PhD, Wan-Yi Kang, MD, Gin-Chung Liu, MD, Eing-Long Kao, MD, Ming-Tsung Chuang, MD, and Shah-Hwa Chou, MD

1489 **Infective Endocarditis Associated With a Scorpion Sting**
Grayson H. Wheatley III, MD, Michael A. Wait, MD, and Michael E. Jessen, MD

1490 **CardioWest Total Artificial Heart in a Moribund Adolescent With Left Ventricular Thrombi**
M. Cristina Smith, MD, Francisco A. Arabía, MD, Pei H. Tsau, MD, Richard G. Smith, MSEE, Raj K. Bose, MD, Daniel S. Woolley, MD, Birger E. Rhenman, MD, Gulshan K. Sethi, MD, and Jack G. Copeland, MD

1493 **Treatment of Ventricular Assist Device Driveline Infection With Vacuum-Assisted Closure System**
David D. Yuh, MD, Maryann Albaugh, RN, BSN, Susan Ullrich, RN, MSN, and John V. Conte, MD

1495 **Repair of Aortic–Left Atrial Fistula Following the Transcatheter Closure of an Atrial Septal Defect**
Dennis M. Mello, MD, John Fahey, MD, and Gary S. Kopf, MD

1498 **A Rare Presentation of Tricuspid Valve Thrombus in a Normal Heart**
Pankaj Saxena, MCh, Ross Mejia, MBBS, and Robert K. W. Tam, FRACS

1500 **Idiopathic Pulmonary Artery Aneurysm**
Subrato J. Deb, MD, Kenton J. Zehr, MD, and Raymond C. Shields, MD

1502 **Primary Lymphoma of the Aorta Presenting as a Descending Thoracic Aortic Aneurysm**
Anthony L. Estrera, MD, Eyal E. Porat, MD, Rashad Aboul-Nasr, MD, Ken Y. Sin, MD, L. Maximilian Buja, MD, and Hazim J. Safi, MD

1504 **Transfusion-Free Complex Cardiac Surgery With Cardiopulmonary Bypass in a 3.55-Kg Jehovah's Witness Neonate**
Michael Huebler, MD, Wolfgang Boettcher, ECCP, Andreas Koster, MD, Michael Emeis, MD, Peter Lange, MD, and Roland Hetzer, MD

1507 **Bloodless Surgery of Acute Type A Aortic Dissection in a Jehovah's Witness Patient**
Miralem Pasic, MD, PhD, Wolfgang Ruisz, MD, Andreas Koster, MD, PhD, and Roland Hetzer, MD, PhD

1510 **Esophageal Cancer Surgery in Heart Transplant Patients**
Burkhard H. A. von Rahden, MD, Hubert J. Stein, MD, Georg Schmidt, MD, Holger Bartels, MD, Matthias Overbeck, MD, and J. Rüdiger Siewert, MD

1512 **Intrathoracic Gastrojejunostomy for Gastric Outlet Obstruction After Ivor Lewis Esophagogastrectomy**
Cullen D. Morris, MD, Francis Owings, MD, and Joseph I. Miller, Jr, MD

1513 **Surgical Treatment of Esophageal Varices Caused by an Arteriovenous Fistula Between an Artery of the Thyroid Gland and the Submucosal Venous Network of the Esophageal Wall**
Manabu Okuyama, MD, Satoru Motoyama, MD, Reijiro Saito, MD, Kiyotomi Maruyama, MD, Hideki Ota, MD, Manabu Hashimoto, MD, and Jun-ich Ogawa, MD

1515 **Primary Extramedullary Hematopoiesis Manifesting As Massive Bilateral Chylothorax**
Arup K. Ghosh, MS, FRCS, Joya Pawade, MD, Graham R. Standen, FRCP, and Loïc Lang-Lazdunski, MD, PhD

1517 **Spontaneous Hemothorax After Caesarian Section: An Unusual Manifestation of Diaphragmatic Fenestrations**
Paul Vaughan, MRCS Ed, Paul J. Hooper, MRCOG, and John P. Duffy, FRCS (CTh)

1519 **Rheumatoid Pleural Effusion in the Absence of Arthritic Disease**
James S. Allan, MD, Dean M. Donahue, MD, and Julie M. Garrity, RN

1521 **Of Buffaloes, Horseshoes, and Having No Connections**
Alden M. Parsons, MD, and Frank C. Detterbeck, MD

1523 **Primary Pulmonary Malignant Meningioma**
Jacoba J. C. van der Meij, MD, Karin A. Boomars, MD, PhD, Jules M. M. van den Bosch, MD, PhD, Willem J. van Boven, MD, PhD, Peter C. de Bruin, MD, PhD, and Cornelis A. Seldenrijk, MD, PhD

1525 **Synchronous Mediastinal Ganglioneuroma and Retroperitoneal Pheochromocytoma**
Shin-ichi Takeda, MD, Masato Minami, MD, Yoshifumi Inoue, MD, and Hikaru Matsuda, MD

IMAGES IN CARDIOTHORACIC SURGERY

e-Only Content

e13 **Massive Pneumoperitoneum: A Late Complication of the Denver Pleuroperitoneal Shunt**
Christophoros N. Foroulis, MD, PhD, and Nikolaos A. Desimonas, MD

1528 **True Versus False Ventricular Aneurysm: Accurate Diagnosis With Gadolinium Magnetic Resonance**
Rafael García Fuster, MD, PhD, Jorge Estornell, MD, Fernando Hornero, MD, and José A. Montero, MD, PhD

1529 **Fetal Rhabdomyoma Causing Postnatal Critical Left Ventricular Outflow Tract Obstruction**
Catherine M. Ikemba, MD, Benjamin W. Eidem, MD, V. Vivian Dimas, MD, Mary P. O'Day, MD, and Charles D. Fraser, Jr, MD

HOW TO DO IT

e-Only Content

e14 **Modified Children's II Operation on the Beating Heart Allows Growth Potential**
Boulos Asfour, MD, PhD, Christoph Fink, MD, Nicodème Sinzobahamvya, MD, Jutta Wetter, MD, Andreas E. Urban, MD, and Joachim Photiadis, MD

1530 **A Technique for Salvaging a Critical Internal Mammary Artery Bypass Graft Damaged During Resternotomy**
Sridhar Rathinam, FRCS, Ramesh Gohil, ACP, James Galea, FRCS, and Bruce E. Keogh, FRCS

1532 **Inferior T Hemisternotomy After Previous Bypass Grafting With the In Situ RITA in Front of the Aorta**
Fadi Farhat, MD, Stéphane Aubert, MD, Pascal Rosamel, MD, and Olivier Jegaden, MD

1534 **A Short Wholly Inside-Out Reversed Vascular Graft Facilitating Difficult Aortic Anastomosis**
Shih-Rong Hsieh, MD, and Edward D. Verrier, MD

1537 **Advanced Sternal Closure to Prevent Dehiscence in Obese Patients**
Arndt-H. Kiessling, MD, Frank Isgro, MD, Udo Weisse, MD, Andreas Möltner, PhD, Werner Saggau, MD, and Joachim Boldt, MD

REVIEWS

1540 Restitution of the Aortic Valve: What is New, What is Proven, and What is Obsolete?
Johannes M. Albes, MD, PhD, Ulrich A. Stock, MD, PhD, and Martin Hartrumpf, MD

1550 Efficacy of Methods of Intercostal Nerve Blockade for Pain Relief After Thoracotomy
Frank C. Detterbeck, MD

KEY REFERENCES

1560 Bronchioloalveolar Carcinoma and Ground Glass Opacities
Nasser K. Altorki, MD

CORRESPONDENCE

1562 Bicuspid Aortic Valves and Dilatation of the Ascending Aorta
Oktay Tutarel, MD, and Mechthild Westhoff-Bleck, MD

Reply
Francis Robicsek, MD, PhD

1563 Sliding Plasty for Extensive Resection of the Posterior Mitral Leaflet
Abe DeAnda Jr, MD, FACS, and John S. Ikonomidis, MD, PhD

1563 Did the Global Myocardial Ischemia Produce an Influence On High-Frequency QRS Potentials?
Yasushi Terada, MD

Reply
Shonosuke Matsushita, MD, and Yuzuru Sakakibara, MD

1564 Intraoperative Pleural Lavage Cytology Should Not Influence Decision for Radical Surgery in Nonsmall Cell Lung Cancer
C S Pramesh, MS, FRCS, Rajesh C. Mistry, MS, and Jaiprakash Agarwal, MD

Reply
Giovanni Vicidomini, MD, PhD, Mario Santini, MD, and Vincenzo Pastore, MD

1565 Pericardial Sling Increases OPCAB Safety and Applicability
Helmut Mair, MD, Sabine Daebritz, MD, Bruno Reichart, MD, and Paul Sergeant, MD

Reply
Jennifer S. Lawton, MD, and Ralph J. Damiano, Jr, MD

1567 A Simple Device for Visualization in Off-Pump Coronary Artery Bypass Surgery
Walter J. Gomes, MD, PhD, and Enio Buffolo, MD, PhD

REVIEW OF RECENT BOOKS

1568 Cardiac Transplantation: The Columbia University Medical Center/New York—Presbyterian Hospital Manual
David C. McGiffin, MD

ANNOUNCEMENTS

A-34 Information for Authors

A-39 Guidelines for Reviewers

A-41 Conditions for Publication Form

A-43 Events of Interest

1190 Online Discussion Forum

1240 Requirements for Recertification/ Maintenance of Certification in 2006

1269 Notice From the American Board of Thoracic Surgery Regarding Trainees and Candidates for Certification Who Are Called to Military Service Related to the War on Terrorism

1346 Notice From the American Board of Thoracic Surgery

1380 Southern Thoracic Surgical Association: Fifty-Second Annual Meeting

1400 The Society of Thoracic Surgeons: Forty-Second Annual Meeting—New Location

1444 The Society of Thoracic Surgeons Policy Action Center

1452 Member and Individual Subscriber Access to the Online *Annals*

A-47 Classified Advertisements

A-63 Index to Advertisers

Number 5 November 2005

EDITORIAL

1569 **Impact of Resident Duty Hour Standards on Cardiothoracic Residents and Program Directors**
Jacob DeLaRosa, MD, Vinod H. Thourani, MD, Grason H. Wheatley III, MD, David Michael McMullan, MD, Raffy L. Karamanoukian, MD, Mary G. Greene, MD, MPH, and David L. Morales, MD

ETHICS IN CARDIOTHORACIC SURGERY

1572 **Should Coronary Artery Bypass Grafting Be Regionalized?**
Brahmajee K. Nallamothu, MD, MPH, Kim A. Eagle, MD, Victor A. Ferraris, MD, PhD, and Robert M. Sade, MD

1572 **Introduction**
Robert M. Sade, MD

1572 **Pro**
Brahmajee K. Nallamothu, MD, MPH, and Kim A. Eagle, MD

1575 **Con**
Victor A. Ferraris, MD, PhD

1579 **Concluding Remarks**
Robert M. Sade, MD

J. MAXWELL CHAMBERLAIN MEMORIAL PAPER

1582 **Outcomes After the Stage I Reconstruction Comparing the Right Ventricular to Pulmonary Artery Conduit With the Modified Blalock Taussig Shunt**
Sarah Tabbutt, MD, PhD, Troy E. Dominguez, MD, Chitra Ravishankar, MD, Bradley S. Marino, MD, Peter J. Gruber, MD, PhD, Gil Wernovsky, MD, J. William Gaynor, MD, Susan C. Nicolson, MD, and Thomas L. Spray, MD

ORIGINAL ARTICLES: CARDIOVASCULAR

1592 **Pulmonary Arteriovenous Malformations in Children After the Kawashima Operation**
John W. Brown, MD, Mark Ruzmetov, MD, PhD, Palaniswamy Vijay, PhD, Mark D. Rodefeld, MD, and Mark W. Turrentine, MD

1597 **Incorporation of the Hepatic Veins Into the Cavopulmonary Circulation in Patients With Heterotaxy and Pulmonary Arteriovenous Malformations After a Kawashima Procedure**
Doff B. McElhinney, MD, Jacqueline Kreutzer, MD, Peter Lang, MD, John E. Mayer, Jr, MD, Pedro J. del Nido, MD, and James E. Lock, MD

1604 **Creation of a Brachial Arteriovenous Fistula for Treatment of Pulmonary Arteriovenous Malformations After Cavopulmonary Anastomosis**
Doff B. McElhinney, MD, Audrey C. Marshall, MD, Peter Lang, MD, James E. Lock, MD, and John E. Mayer, Jr, MD

1610 **Superior Durability of Synergraft Pulmonary Allografts Compared With Standard Cryopreserved Allografts**
Zarry Tavakkol, MD, Sarah Gelehrter, MD, Caren S. Goldberg, MD, MS, Edward L. Bove, MD, Eric J. Devaney, MD, and Richard G. Ohye, MD

1615 **Early Insertion of a Pulmonary Valve for Chronic Regurgitation Helps Restoration of Ventricular Dimensions**
Hitendu Hasmukhlal Dave, MD, Emanuela R. Valsangiacomo Buechel, MD, Ali Dodge-Khatami, MD, PhD, Alexander Kadner, MD, Valentin Rousson, PhD, Urs Bauersfeld, MD, and René Prêtre, MD

1622 **Early Experience With Valve-Sparing Aortic Root Replacement in Children**
Luca A. Vricella, MD, Jason A. Williams, MD, William J. Ravekes, MD, Kathryn W. Holmes, MD, Harry C. Dietz, MD, Vincent L. Gott, MD, and Duke E. Cameron, MD

1628 **Pediatric Autograft Aortic Root Replacement: A Prospective Follow-Up Study**
Johanna J. M. Takkenberg, MD, PhD, Arie Pieter Kappetein, MD, PhD, Lex A. van Herwerden, MD, PhD, Maarten Witsenburg, MD, PhD, Lenny Van Osch-Gevers, MD, PhD, and Ad J. J. C. Bogers, MD, PhD

1634 Coronary Reimplantation After Neoaortic Reconstruction Can Yield Better Result in Arterial Switch Operation: Comparison With Open Trap Door Technique
Yun Hee Chang, MD, Si Chan Sung, MD, Hyoung Doo Lee, MD, Siho Kim, MD, Jong Soo Woo, MD, and Young Seok Lee, MD

1641 Late Results After PTCA for Coronary Stenosis After the Arterial Switch Procedure for Transposition of the Great Arteries
Christoph Kampmann, MD, Wlodzimierz Kuroczynski, MD, Hubert Trübel, MD, Markus Knuf, MD, Martin Schneider, MD, and Markus K. Heinemann, MD, PhD

Invited Commentary
Roger Mee, FRACS

1647 Ascending Aortic Extension for Enlargement of the Aortopulmonary Space in Children with Pulmonary Artery Stenosis
Craig J. Baker, MD, Winfield J. Wells, MD, Chris A. Derby, MD, Suzanne Rizi, BS, MPH, and Vaughn A. Starnes, MD

1652 Carotid-Subclavian Artery Index: New Echocardiographic Index to Detect Coarctation in Neonates and Infants
Ali Dodge-Khatami, MD, PhD, Stephanie Ott, MD, Stefano Di Bernardo, MD, and Felix Berger, MD

Invited Commentary
Robert D. B. Jaquiss, MD, and Peter C. Frommelt, MD

1659 Comparison of Angioplasty and Surgery for Neonatal Aortic Coarctation
Andrew C. Fiore, MD, Laurice K. Fischer, MS, Theresa Schwartz, MS, Saadeh Jureidini, MD, Ian Balfour, MD, Dustin Carpenter, BA, Daphne Demello, MD, Katherine S. Virgo, PhD, D. Glenn Pennington, MD, and Robert G. Johnson, MD

1666 Cor Triatriatum: Presentation, Diagnosis and Long-Term Surgical Results
Nelson Alphonso, MD, Martin A. Nørgaard, MD, Andrew Newcomb, MD, Yves d'Udekem, MD, Christian P. Brizard, MD, and Andrew Cochrane, MD

1672 Steroid Supplementation: A Legitimate Pharmacotherapy After Neonatal Open Heart Surgery
Makoto Ando, MD, In-Sam Park, MD, Naoki Wada, MD, and Yukihiro Takahashi, MD

1679 Hypothermic Circulatory Arrest Enables Aortic Valve Replacement in Patients With Unclampable Aorta
Sary F. Aranki, MD, Meena Nathan, MD, Prem Shekar, MD, Gregory Couper, MD, Robert Rizzo, MD, and Lawrence H. Cohn, MD

1688 No-Clamp Technique for Valve Repair or Replacement in Patients With a Porcelain Aorta
Leonard N. Girardi, MD, Karl H. Krieger, MD, Charles A. Mack, MD, and O. Wayne Isom, MD

1693 Quality of Life After Heart Valve Surgery With Prolonged Intensive Care
Laila Hellgren, MD, and Elisabeth Ståhle, MD, PhD

1699 Mitroflow Synergy Prostheses for Aortic Valve Replacement: 19 Years Experience With 1,516 Patients
Kazutomo Minami, MD, Armin Zittermann, PhD, Sebastian Schulte-Eistrup, MD, Heinrich Koertke, MD, and and Reiner Körfer, MD

Invited Commentary
David S. Bach, MD

1706 Intraoperative Effects of the Coapsys Annuloplasty System in a Randomized Evaluation (RESTOR-MV) of Functional Ischemic Mitral Regurgitation
Eugene A. Grossi, MD, Paul C. Saunders, MD, Y. Joseph Woo, MD, Deepak M. Gangahar, MD, John C. Laschinger, MD, David C. Kress, MD, Michael P. Caskey, MD, Charles F. Schwartz, MD, and James Wudel, MD

1712 Surgical Treatment of Cardiac Papillary Fibroelastoma: A Single Center Experience With Eighty-Eight Patients
Dumbor L. Ngaage, MB, BS, Charles J. Mullany, MB, MS, Richard C. Daly, MD, Joseph A. Dearani, MD, William D. Edwards, MD, Henry D. Tazelaar, MD, Christopher G. A. McGregor, MD, Thomas A. Orszulak, MD, Francisco J. Puga, MD, Hartzell V. Schaff, MD, Thoralf M. Sundt III, MD, and Kenton J. Zehr, MD

1719 Is Reoperation Still a Risk Factor in Coronary Artery Bypass Surgery?
Joseph F. Sabik III, MD, Eugene H. Blackstone, MD, Penny L. Houghtaling, MS, Peter A. Walts, MD, and Bruce W. Lytle, MD

1728 Evidence of Nitric Oxide Produced by the Internal Mammary Artery Graft in Venous Drainage of the Recipient Coronary Artery
Ferenc I. Tarr, MD, PhD, Mária Sasvári, MD, Márton Tarr, MD, and Rozália Rácz, MD

1732 Changing Incidence, Type, and Natural History of Conduction Defects After Coronary Artery Bypass Grafting
David J. Cook, MD, Joseph M. Bailon, BSN, CRNA, Tonia T. Douglas, BSN, CRNA, Kathleen D. Henke, BSN, CRNA, John R. Westberg, BScN, CRNA, Mary E. Shirk-Marienau, MS, CRNA, and Thoralf M. Sundt, MD

1738 **Results of Coronary Artery Endarterectomy and Coronary Artery Bypass Grafting for Diffuse Coronary Artery Disease**
Srikrishna Sirivella, MD, Isaac Gielchinsky, MD, and Victor Parsonnet, MD

Invited Commentary
Giuseppe Tavilla, MD, PhD

1746 **Stroke After Coronary Artery Bypass Grafting**
Robert A. Baker, PhD, Lisa J. Hallsworth, BPsych(Hons), and John L. Knight, FRACS

1751 **Adverse 30-Day Outcomes After Cardiac Surgery: Predictive Role of Intraoperative Myocardial Acidosis**
Dharam J. Kumbhani, MD, SM, Nancy A. Healey, BS, Kunda S. Biswas, MD, Vladimir Birjiniuk, MD, Michael D. Crittenden, MD, Patrick R. Treanor, CCP, and Shukri F. Khuri, MD, FACS

1758 **Cardiac Troponin I Release After Coronary Artery Bypass Grafting Operation: Effects on Operative and Midterm Survival**
Domenico Paparella, MD, Giangiuseppe Cappabianca, MD, Giuseppe Visicchio, MD, Antonella Galeone, MD, Angelo Marzovillo, MD, Nunzio Gallo, MD, Cataldo Memmola, MD, PhD, and Luigi de Luca Tupputi Schinosa, MD

1765 **Incidence of Sternal Infection in Diabetic Patients Undergoing Bilateral Internal Thoracic Artery Grafting**
Aziz U. Momin, MRCS, Ranjit Deshpande, FRCS (CTh), James Potts, BS, Ahmed El-Gamel, FRCS (CTh), Michael T. Marrinan, FRCS (Ed), Joseph Omigie, BS, and Jatin B. Desai, FRCS (CTh)

1773 **Effects of Resveratrol in Storage Solution on Adhesion Molecule Expression and Nitric Oxide Synthesis in Vein Grafts**
Sadi Kaplan, MD, Jeffrey A. Morgan, MD, Gianluigi Bisleri, MD, Faisal H. Cheema, MD, Hasan O. Akman, PhD, Veli K. Topkara, MD, and Mehmet C. Oz, MD

1779 **Increasing Transplanted Cell Survival With Cell-Based Angiogenic Gene Therapy**
Terrence M. Yau, MD, MS, Christopher Kim, BS, Dawn Ng, BS, Guangming Li, MD, Yaoguang Zhang, MD, Richard D. Weisel, MD, and Ren-Ke Li, MD, PhD

1787 **Effects of Mycophenolate Mofetil on Cardiac Allograft Survival and Cardiac Allograft Vasculopathy in Miniature Swine**
Margaret L. Schwarze, MD, Stuart L. Houser, MD, Ashok Muniappan, MD, James S. Allan, MD, Matthew T. Menard, MD, Isabel McMorrow, PhD, Michaella E. Maloney, BA, and Joren C. Madsen, MD, DPhil

1794 **Fibronectin-Hepatocyte Growth Factor Enhances Reendothelialization in Tissue-Engineered Heart Valve**
Takeyoshi Ota, MD, Yoshiki Sawa, MD, PhD, Shigemitsu Iwai, MD, Takashi Kitajima, PhD, Yuichiro Ueda, PhD, Chris Coppin, MD, PhD, Hikaru Matsuda, MD, PhD, and Yutaka Okita, MD

Invited Commentary
Helmut Gulbins, MD, and Anita Pritisanac, MD

1803 **Hypoxia-Reoxygenation, St. Thomas Cardioplegic Solution, and Nicorandil on Endothelium-derived Hyperpolarizing Factor in Coronary Microarteries**
Ying-Ying Dong, MD, Min Wu, MD, Anthony P. C. Yim, MD, and Guo-Wei He, MD, PhD, DSc

1812 **Attenuation of DNA Damage in Canine Hearts Preserved by Continuous Hypothermic Perfusion**
Torin P. Fitton, MD, Christopher J. Barreiro, MD, Pramod N. Bonde, MD, MS, Chiming Wei, MD, PhD, Fred Gage, PhD, Rene Rodriguez, PhD, and John V. Conte, MD

1821 **Novel Tissue-Engineered Biodegradable Material for Reconstruction of Vascular Wall**
Shigemitsu Iwai, MD, Yoshiki Sawa, MD, Satoshi Taketani, MD, Kei Torikai, MD, Koichiro Hirakawa, MS, and Hikaru Matsuda, MD

Invited Commentary
Paul Simon, MD, Marie-Theres Kasimir, MD, Erwin Rieder, MD, and Günter Weigel, MD

1829 **An Epidural Cooling Catheter Protects the Spinal Cord Against Ischemic Injury in Pigs**
Atsuo Mori, MD, Toshihiko Ueda, MD, Takashi Hachiya, MD, Nobuyuki Kabei, PhD, Hideyuki Okano, MD, Ryohei Yozu, MD, and Tatsuumi Sasaki, MD

Invited Commentary
Jan D. Galla, MD, PhD

1835 **Closure of the Pericardium Using Synthetic Bioabsorbable Polymers**
Kei Sakuma, MD, Atsushi Iguchi, MD, Yoshito Ikada, MD, and Koichi Tabayashi, MD

ORIGINAL ARTICLES: GENERAL THORACIC

1841 **Resection for Tumors With Carinal Involvement: Technical Aspects, Results, and Prognostic Factors**
Jean-François Regnard, MD, Cédric Perrotin, MD, Riccardo Giovannetti, MD, Olivier Schussler, MD, Antonio Petino, MD, Lorenzo Spaggiari, MD, Marco Alifano, MD, and Pierre Magdeleinat, MD

1847 Pulmonary Resection for Metastatic Malignant Fibrous Histiocytoma: An Analysis of Prognostic Factors
Rakesh M. Suri, MD, DPhil, Claude Deschamps, MD, Stephen D. Cassivi, MD, MS, Francis C. Nichols III, MD, Mark S. Allen, MD, Cathy D. Schleck, BS, and Peter C. Pairolero, MD

1853 Quantitative Computed Tomography Versus Spirometry in Predicting Air Leak Duration After Major Lung Resection for Cancer
Kazuhiro Ueda, MD, Yoshikazu Kaneda, MD, Manabu Sudo, MD, Jinbo Mitsutaka, MD, Tao-Sheng Li, MD, Kazuyoshi Suga, MD, Nobuyuki Tanaka, MD, and Kimikazu Hamano, MD

1859 Spontaneous Hemopneumothorax Revisited: Clinical Approach and Systemic Review of the Literature
Nan-Yung Hsu, MD, Chih-Shiun Shih, MD, Chung-Ping Hsu, MD, and Ping-Ru Chen, MD

1864 Postoperative Chylothorax After Cardiothoracic Surgery in Children
Emily H. Chan, BS, Jennifer L. Russell, MD, William G. Williams, MD, Glen S. Van Arsdell, MD, John G. Coles, MD, and Brian W. McCrindle, MD, MPH

Invited Commentary
Glenn J. Pelletier, MD

1872 Improved Results Treating Lung Allograft Failure With Venovenous Extracorporeal Membrane Oxygenation
Matthew G. Hartwig, MD, James Z. Appel III, MD, Edward Cantu III, MD, Sinan Simsir, MD, Shu S. Lin, MD, PhD, Chong-Chao Hsieh, MD, Richard Walczak, BS, CCP, Scott M. Palmer, MD, and R. Duane Davis, Jr, MD

1881 A Strategy for Determining Which Thoracic Esophageal Cancer Patients Should Undergo Cervical Lymph Node Dissection
Shiro Nagatani, MD, Yutaka Shimada, MD, PhD, Masato Kondo, MD, Junichi Kaganoi, MD, PhD, Masato Maeda, MD, PhD, Go Watanabe, MD, PhD, and Masayuki Imamura, MD, PhD

NEW TECHNOLOGY

1887 LIFEBRIDGE: A Portable, Modular, Rapidly Available "Plug-and-Play" Mechanical Circulatory Support System
Uwe Mehlhorn, MD, Michael Brieske, Dipl-Inf, Uwe M. Fischer, MD, Markus Ferrari, MD, Patrick Brass, MD, Juergen H. Fischer, MD, and Hans-R. Zerkowski, MD

Invited Commentary
Brian F. Buxton, MB, MS

1893 Off-Pump CABG with Synchronized Arterial Flow Ensuring System
Go Watanabe, MD, PhD, Hiroyuki Kamiya, MD, Hiroshi Nagamine, MD, Shigeyuki Tomita, MD, Yoshinao Koshida, MD, Satoshi Nishida, MD, Hiroshi Ohtake, MD, Sadahiko Arai, MD, and Tamotsu Yasuda, MD

1898 Computer-Controlled Stapling System for Lung Surgery
Dominique Gossot, MD, and Albert Nana, MD

Invited Commentary
Richard F. Heitmiller, MD

CASE REPORTS

e-Only Content

e17 Staged Correction of Double Discordance, Situs Inversus, and Absence of True Pulmonary Arteries
Federico Brunelli, MD, Andrea Amaducci, MD, Giordano Tasca, MD, Zen Mhagna, MD, and Bruno Amari, MD

1903 Inflammatory Reaction After Sirolimus-Eluting Stent Implant
Walter J. Gomes, MD, PhD, Oswaldo Giannotti-Filho, MD, PhD, Nelson A. Hossne, Jr, MD, Roberto Catani, MD, and Enio Buffolo, MD, PhD

1904 Respiratory Dependent Compression of a Venous Bypass: Therapy by Stenting
Markus J. Wilhelm, MD, Martin Igual, MD, Raymond Mury, MD, Reza Tavakoli, MD, Raoul Pescia, MD, Bruno Vettiger, MD, David Koller, MD, Marko I. Turina, MD, and Michele Genoni, MD

1907 Transcatheter Repair of Recurrent Postinfarct Ventricular Septal Defects
Nirav R. Shah, BA, Jeffrey A. Goldstein, MD, David T. Balzer, MD, John M. Lasala, MD, PhD, and Nader Moazami, MD

1909 Chronic Mitral Valve Rejection Requiring Replacement in a Nine-Year-Old Allograft
Kai Ihnken, MD, James I. Fann, MD, Thomas A. Burdon, MD, Frances L. Johnson, MD, Jon C. Kosek, MD, and Norman E. Shumway, MD, PhD

1911 Mitral Valve Replacement for Mitral Stenosis Secondary to Hunter's Syndrome
Kausik Bhattacharya, FRCS, Simon C. Gibson, MRCS, and Vivek L. Pathi, FRCS, CTh

1912 Idiopathic Inflammatory Aneurysm of the Ascending Aorta
Hrvoje Gasparovic, MD, Luigino Nascimben, MD, David W. Kindelberger, MD, and John G. Byrne, MD

1914 **Successful Surgical Treatment of Takayasu's Arteritis Associated With Pyoderma Gangrenosum**
Shinji Kanemitsu, MD, PhD, Takatsugu Shimono, MD, PhD, Hitoshi Kusagawa, MD, PhD, Koji Onoda, MD, PhD, and Isao Yada, MD, PhD

1917 **Anomalous Origin of the Right Pulmonary Artery From the Ascending Aorta With Fibrous Continuity to the Pulmonary Trunk**
Martin Kostolny, MD, Ergin Kocyildirim, MD, Marc R. de Leval, MD, and Robert H. Anderson, MD

1919 **Circumflex Coronary Artery From Right Pulmonary Artery in Hypoplastic Left Heart Syndrome**
Emmanuel Villa, MD, Gianluca Brancaccio, MD, Adriano Carotti, MD, Paola Francalanci, MD, and Roberto M. Di Donato, MD

1920 **Successful Use of Thoratec Biventricular Support in a Small Child Awaiting Cardiac Transplantation**
Rakesh M. Suri, MD, DPhil, Richard C. Daly, MD, Joseph A. Dearani, MD, and Christopher G. A. McGregor, MB, FRCS

1922 **Annuloplasty of the Regurgitant Mitral Valve After Myocarditis in Children**
Muthukumaran C. Sivaprakasam, MRCP, James P. Gnanapragasam, MRCP, Anthony P. Salmon, MD, James L. Monro, FRCS, Steve Livesey, FRCS, Barry R. Keeton, MD, and Joseph J. Vettukattil, MD

1924 **Proximal Conduit Obstruction After Sano Modified Norwood Procedure**
John J. Nigro, MD, Robert D. Bart, MD, Christopher D. Derby, MD, Mark S. Sklansky, MD, and Vaughn A. Starnes, MD

1928 **Use of a Modified Dumon Stent for Postoperative Bronchopleural Fistula**
Hisashi Tsukada, MD, and Hiroaki Osada, MD

1930 **Occlusion of a Broncho-Cutaneous Fistula With Endobronchial One-Way Valves**
Gregory I. Snell, FRACP, Lynda Holsworth, RN, Sue Fowler, RN, Leif Eriksson, MD, PhD, Anna Reed, MD, Fredy J. Daniels, MS, and Trevor J. Williams, FRACP

1933 **New Treatment Method for Reexpansion Pulmonary Edema: Differential Lung Ventilation**
Sang Rock Cho, MD, Jeong Sang Lee, MD, and Mun Soo Kim, MD

1934 **Intrathoracic Splenosis**
Vinod H. Thourani, MD, Jyotirmay Sharma, MD, Ignacio G. Duarte, MD, and Joseph I. Miller, Jr, MD

1936 **Tracheobronchopathia Osteochondroplastica Occurring in a Subsegmental Bronchus and Causing Obstructive Pneumonia**
Yoshiki Shigematsu, MD, Kenji Sugio, MD, Manabu Yasuda, MD, Masakazu Sugaya, MD, Kenji Ono, MD, Mitsuhiro Takenoyama, MD, Takeshi Hanagiri, MD, and Kosei Yasumoto, MD

1938 **Antireflux Operation for Gastroesophageal Reflux After Roux-en-Y Gastric Bypass for Obesity**
Raymond H. Chen, MD, PhD, David Lautz, MD, Richard J. Gilbert, MD, and Raphael Bueno, MD

IMAGES IN CARDIOTHORACIC SURGERY

e-Only Content

e20 **Spontaneous Rupture of the Inferior Thyroid Artery Leading to Life-Threatening Mediastinal Hematoma**
Serban Bageacu, MD, Jean-Michel Prades, MD, PhD, David Kaczmarek, MD, and Jack Porcheron, MD, PhD

1941 **Active Malignant Pleural Effusion Captured Through the Thoracoscope**
Ajay V. Maker, MD, and Dao M. Nguyen, MD

1942 **Herniation of Postpneumonectomy Space Fluid**
Hon Chi Suen, MD, Victor M. Chavez, MD, Robert T. Farmer, MD, Guillermo Rodriguez, Jr, MD, and Bill B. Daily, MD, PhD

HOW TO DO IT

e-Only Content

e22 **Innovative Monolateral Approach for Closed-Chest Atrial Fibrillation Surgery**
Gianluigi Bisleri, MD, and Claudio Muneretto, MD

1943 **Pulmonary Root Translocation for Repair of Taussig-Bing Anomaly with Interrupted Arch**
Hong Gook Lim, MD, Jeong Ryul Lee, MD, Eun Jung Bae, MD, and Curie Ahn, MD

1946 **A Simple System to Deliver Blood Cardioplegia**
Sylvio C. Provenzano, Jr, MD, MS, Robert Stacey, CCP, David C. Newman, FRACS, MBBS, Hugh Wolfenden, FRACS, MBBS, Con Manganas, FRACS, MBBS, and Peter W. Grant, FRACS, MBBS

1948 **Multiple Arterial Revascularization Using the Tangential K-Graft Technique**
Boris Orlov, MD, Jacob Gurevitch, MD, Alexander Kogan, MD, Victor Rubchevsky, MD, Amnon Y. Zlotnick, MD, and Dan Aravot, MD

1951 **A Novel Surgical Correction Through a Small Transverse Incision for Pectus Excavatum**
Liang-Shun Wang, MD, Kuang-Tai Kuo, MD, Hao-Wei Wang, MD, Chia-Hsin Yang, MD, and Taiwai Chin, MD

REVIEWS

1955 **Neonatal Brain Protection and Deep Hypothermic Circulatory Arrest: Pathophysiology of Ischemic Neuronal Injury and Protective Strategies**
Gabriel Amir, MD, Chandra Ramamoorthy, MD, R. Kirk Riemer, PhD, V. Mohan Reddy, MD, and Frank L. Hanley, MD

1965 **Acquiring Proficiency in Off-Pump Surgery: Traversing the Learning Curve, Reproducibility, and Quality Control**
Gavin J. Murphy, MD, FRCS, Chris A. Rogers, PhD, Massimo Caputo, MD, and Gianni D. Angelini, MD, FRCS

OUR SURGICAL HERITAGE

1971 **Albert Wojciech Adamkiewicz: The Discoverer of the Variable Vascularity of the Spinal Cord**
Janusz H. Skalski, MD, PhD, and Marian Zembala, MD, PhD

CORRESPONDENCE

1976 **PDA Ligation: Trans or Extrapleural Approach**
Sameh Ibrahim Sersar, MD, Hytham Abdel Mooty, MBBCH, Muna Mohammed Hafez, MD, Mohammed Fouad Ismail, MS, Amal A. Refaat, MD, and Mohammed F. Ibrahim, FRCS

Reply
Vladimiro L. Vida, MD, and Aldo R. Castañeda, MD, PhD

1977 **Exhaled Nitric Oxide After Cardiopulmonary Bypass**
Rachid Zegdi, MD, PhD, and Jean-Noël Fabiani, MD

Reply
Christos Alexiou, FRCS, PhD, Augustine T. M. Tang, FRCS (CTh), DM, David C. Smith, FRCA, MD, Stuart V. Sheppard, PhD, Marcus P. Haw, FRCS, MS, and Roz Gibbs, PhD

1978 **How Should Bronchioloalveolar Carcinoma of the Lung 3 Centimeters or Less Be Treated?**
C S Pramesh, MS, FRCS, Rajesh C. Mistry, MS, and Jaiprakash Agarwal, MD

Reply
Hiroyuki Sakurai, MD, Yoh Dobashi, MD, and Masahiko Matsumoto, MD, PhD

1979 **Relearning the Lessons of the Past: Are We Making Progress?**
Frank C. Detterbeck, MD

Reply
Özcan Birim, MD, Arie Pieter Kappetein, MD, PhD, and Ad J. J. C. Bogers, MD, PhD

1981 **Loculated Neonatal Chylothorax Treated With Octreotide: Complete Recovery While on Unrestricted Full Fat Breast Milk**
Charles C. Roehr, MD, Andreas Jung, MD, Oliver A. Curcin, MD, Hans Proquitte, MD, Hannes Hammer, MD, and Roland R. Wauer, MD

Reply
Mohamed A. Hamdan, MD

1982 **Transxiphoid Hand-Assisted Thoracoscopic Surgery: An Approach Included in the Armamentarium**
Tommaso C. Mineo, MD, Vincenzo Ambrogi, MD, and Eugenio Pompeo, MD

Reply
Frank C. Detterbeck, MD

REVIEW OF RECENT BOOKS

1984 **Surgical Foundations: Essentials of Thoracic Surgery by Larry R. Kaiser, MD, and Sunil Singhal, MD**
Henning Gaissert, MD

ANNOUNCEMENTS

A-32 **Information for Authors**

A-37 **Guidelines for Reviewers**

A-39 **Conditions for Publication Form**

A-41 **Events of Interest**

1603 **Online Discussion Forum**

1665 **Requirements for Recertification/ Maintenance of Certification in 2006**

1718 **Notice From the American Board of Thoracic Surgery Regarding Trainees and Candidates for Certification Who Are Called to Military Service Related to the War on Terrorism**

1737 **Notice From the American Board of Thoracic Surgery**

1811 **The Society of Thoracic Surgeons: Forty-Second Annual Meeting—New Location**

1852 The Society of Thoracic Surgeons Policy Action Center

1983 Member and Individual Subscriber Access to the Online *Annals*

A-45 Classified Advertisements

A-55 Index to Advertisers

Number 6 December 2005

EDITORIAL

1985 **Home Schooling**
L. Henry Edmunds, Jr, MD

ORIGINAL ARTICLES: GENERAL THORACIC

1988 **Extended Surgical Staging for Potentially Resectable Malignant Pleural Mesothelioma** CME
David C. Rice, MB, BCh, Jeremy J. Erasmus, MD, Craig W. Stevens, MD, PhD, Ara A. Vaporciyan, MD, Judy S. Wu, BS, Anne S. Tsao, MD, Garrett L. Walsh, MD, Stephen G. Swisher, MD, Wayne L. Hofstetter, MD, Nelson G. Ordonez, MD, and W. Roy Smythe, MD

1994 **Proposal of a Novel System for the Staging of Thymic Epithelial Tumors**
Amedeo Vittorio Bedini, MD, Stefano Michele Andreani, MD, FRCS (Ed), Luca Tavecchio, MD, Alessandra Fabbri, MD, Roberto Giardini, MD, Tiziana Camerini, PhD, Rosaria Bufalino, MS, Alberto Morabito, PhD, and Juan Rosai, MD

Invited Commentary
Kazuya Kondo, MD, PhD

2002 **Surgical Management of Thymic Epithelial Tumors: A Retrospective Review of 204 Cases**
Wentao Fang, MD, Wenhu Chen, MD, Gang Chen, MD, and Yong Jiang, MD

Invited Commentary
Norman J. Snow, MD

2008 **Late-Onset Occult Pneumothorax After Lung Volume-Reduction Surgery**
Federico Tacconi, MD, Eugenio Pompeo, MD, and Tommaso C. Mineo, MD

2013 **Comparative Study of Subxiphoid Versus Video-Thoracoscopic Pericardial "Window"**
Patrick K. H. O'Brien, MD, John C. Kucharczuk, MD, M. Blair Marshall, MD, Joseph S. Friedberg, MD, Zhen Chen, PhD, Larry R. Kaiser, MD, and Joseph B. Shrager, MD

2020 **^{11}C-Acetate Positron Emission Tomography Imaging for Lung Adenocarcinoma 1 to 3 cm in Size With Ground-Glass Opacity Images on Computed Tomography**
Hiroaki Nomori, MD, PhD, Noboru Kosaka, MD, PhD, Kenichi Watanabe, MD, Takashi Ohtsuka, MD, Tsuguo Naruke, MD, PhD, Toshiaki Kobayashi, MD, PhD, and Kimiichi Uno, MD, PhD

2026 **Risk of Pleural Recurrence After Needle Biopsy in Patients With Resected Early Stage Lung Cancer**
Haruhisa Matsuguma, MD, Rie Nakahara, MD, Tetsuro Kondo, MD, Yukari Kamiyama, MD, Kiyoshi Mori, MD, and Kohei Yokoi, MD

2032 **Lung Cancer Invading the Chest Wall: A Plea for En-Bloc Resection but the Need for New Treatment Strategies**
Christophe Doddoli, MD, Benoit D'Journo, MD, Françoise Le Pimpec-Barthes, MD, Antoine Dujon, MD, Christophe Foucault, MD, Pascal Thomas, MD, and Marc Riquet, MD, PhD

Invited Commentary
Walter J. Scott, MD

2041 **Functional Advantage After Radical Segmentectomy Versus Lobectomy for Lung Cancer**
Hiroaki Harada, MD, Morihito Okada, MD, PhD, Toshihiko Sakamoto, MD, PhD, Hidehito Matsuoka, MD, PhD, and Noriaki Tsubota, MD, PhD

2046 **Sleeve Lobectomy Versus Pneumonectomy: Tumor Characteristics and Comparative Analysis of Feasibility and Results**
Patrick Bagan, MD, Pascal Berna, MD, Joao Carlos Das Neves Pereira, MD, PhD, Françoise Le Pimpec Barthes, MD, Christophe Foucault, MD, Antoine Dujon, MD, and Marc Riquet, MD

2051 **Patterns of Surgical Care of Lung Cancer Patients**
Alex G. Little, MD, Valerie W. Rusch, MD, James A. Bonner, MD, Laurie E. Gaspar, MD, Mark R. Green, MD, W. Richard Webb, MD, and Andrew K. Stewart, MA

2057 **Tracheal Compression Caused by Straight Back Syndrome, Chest Wall Deformity, and Anterior Spinal Displacement: Techniques for Relief**
Hermes C. Grillo, MD, Cameron D. Wright, MD, Philippe G. Dartevelle, MD, John C. Wain, MD, and Shinya Murakami, MD

2063 **Reconstitution of Blood Supply of the Denuded Bronchial Stump**
Vladyslav Getman, MD, Elena Devyatko, MD, Dietmar Abraham, MD, Daniela Dunkler, MS, Ernst Wolner, MD, Seyedhossein Aharinejad, MD, PhD, and Michael Rolf Mueller, MD

2070 **Minimally Invasive Esophagectomy for Stage I and II Esophageal Cancer**
Satoshi Yamamoto, MD, Katsunobu Kawahara, MD, Takafumi Maekawa, MD, Takeshi Shiraishi, MD, and Takayuki Shirakusa, MD

2076 **Minimally Invasive Operation for Esophageal Diverticula**
Hiran C. Fernando, MD, James D. Luketich, MD, John Samphire, MD, Miguel Alvelo-Rivera, MD, Neil A. Christie, MD, Percival O. Buenaventura, MD, and Rodney J. Landreneau, MD

Invited Commentary
John M. Streitz, Jr, MD

ORIGINAL ARTICLES: CARDIOVASCULAR

2082 CME **Impact of Unstable Angina on Outcomes of Transmyocardial Laser Revascularization Combined With Coronary Artery Bypass Grafting**
Keith A. Horvath, MD, T. Bruce Ferguson, Jr, MD, Robert A. Guyton, MD, and Fred H. Edwards, MD

2086 **Drug-Eluting Stents Versus Bilateral Internal Thoracic Grafting for Multivessel Coronary Disease**
Itzhak Herz, MD, Yaron Moshkovitz, MD, Dan Loberman, MD, Gideon Uretzky, MD, Rony Braunstein, PhD, Alberto Hendler, MD, Einat Zivi, BmedSc, Yanai Ben-Gal, MD, and Rephael Mohr, MD

2091 **Late Results of Combined Carotid and Coronary Surgery Using Actual Versus Actuarial Methodology**
Cary W. Akins, MD, Alan D. Hilgenberg, MD, Gus J. Vlahakes, MD, Joren C. Madsen, MD, DPhil, Thomas E. MacGillivray, MD, Glenn M. LaMuraglia, MD, and Richard P. Cambria, MD

2098 **Long Segmental Reconstruction of Diffusely Diseased Left Anterior Descending Coronary Artery With Left Internal Thoracic Artery With or Without Endarterectomy**
Toshihiro Fukui, MD, Shuichiro Takanashi, MD, and Yasuyuki Hosoda, MD

2106 **Massachusetts Cardiac Surgery Report Card: Implications of Statistical Methodology**
David M. Shahian, MD, David F. Torchiana, MD, Richard J. Shemin, MD, James D. Rawn, MD, and Sharon-Lise T. Normand, PhD

2114 **Limitations of Hospital Volume as a Measure of Quality of Care for Coronary Artery Bypass Graft Surgery**
Karl F. Welke, MD, Mitchell J. Barnett, PharmD, MS, Mary S. Vaughan Sarrazin, PhD, and Gary E. Rosenthal, MD

Invited Commentary
Morley A. Herbert, PhD

2121 **Meta-Analysis of Randomized Trials Comparing Off-Pump With On-Pump Coronary Artery Bypass Graft Patency**
Alessandro Parolari, MD, PhD, Francesco Alamanni, MD, Gianluca Polvani, MD, Marco Agrifoglio, MD, PhD, Yong Bing Chen, MD, Samer Kassem, MD, Fabrizio Veglia, PhD, Elena Tremoli, PhD, and Paolo Biglioli, MD

2126 **Cerebral Ischemic Injury and Cognitive Impairment After Off-Pump and On-Pump Coronary Artery Bypass Grafting Surgery**
Christian Lund, MD, Kjetil Sundet, PhD, Bjørn Tennøe, MD, Per K. Hol, MD, Kjell A. Rein, MD, PhD, Erik Fosse, MD, PhD, and David Russell, MD, PhD

2132 **Perioperative Patency of Coronary Artery Bypass Grafting is Not Influenced by Off-Pump Technique**
Francesco Onorati, MD, Silvio Olivito, MD, Pasquale Mastroroberto, MD, Antonio di Virgilio, MD, Antonio Esposito, MD, Andrea Perrotti, MD, and Attilio Renzulli, MD, PhD

2141 **Incomplete Revascularization During OPCAB Surgery is Associated With Reduced Mid-Term Event-Free Survival**
Massimo Caputo, MD, Barnaby C. Reeves, DPhil, Chanaka Rajkaruna, FRCS, Hazaim Awair, FRCS, and Gianni D Angelini, FRCS

2148 Renal Dysfunction in High-Risk Patients After On-Pump and Off-Pump Coronary Artery Bypass Surgery: A Propensity Score Analysis
Andrew Chukwuemeka, MD, FRCS, Ashley Weisel, BS, Manjula Maganti, MS, A. Franka Nette, MD, Duminda N. Wijeysundera, MD, William S. Beattie, MD, and Michael A. Borger, MD, PhD

Invited Commentary
Mark Stafford-Smith, MD

2155 Intraoperative Transit Time Flow Measurement: Off-Pump Versus On-Pump Coronary Artery Bypass
Wael Hassanein, MD, Alexander A. Albert, MD, Bert Arnrich, MS, Joerg Walter, PhD, Ina Carolin Ennker, MD, Ulrich Rosendahl, MD, Stefan Bauer, MD, and Juergen Ennker, MD

Invited Commentary
Tomislav Mihaljevic, MD

2162 Single-Layer Versus Multiple-Layer Closure of Leg Wounds After Long Saphenous Vein Harvest: A Prospective Randomized Trial
Muhammed Zafar, PhD, Anil John, FRCS, Zahid Khan, FRCS, Simon M. Allen, FRCS, Adrian J. Marchbank, FRCS, C. Terence Lewis, FRCS, Malcolm J. R. Dalrymple-Hay, PhD, FRCS, James Kuo, FRCS, and Jonathan Unsworth-White, FRCS

2166 The Reversed Elephant Trunk Technique Used for Treatment of Complex Aneurysms of the Entire Thoracic Aorta
Joseph S. Coselli, MD, Scott A. LeMaire, MD, Stacey A. Carter, BA, and Lori D. Conklin, MD

2173 Evolution of Risk for Neurologic Deficit After Descending and Thoracoabdominal Aortic Repair
Hazim J. Safi, MD, Anthony L. Estrera, MD, Charles C. Miller, PhD, Tam T. Huynh, MD, Eyal E. Porat, MD, Ali Azizzadeh, MD, Riad Meada, MD, and Jennifer S. Goodrick, RN

2180 Stentless Aortic Valves are Hemodynamically Superior to Stented Valves During Mid-Term Follow-Up: A Large Retrospective Study
Michael A. Borger, MD, PhD, Susan M. Carson, AHT, Joan Ivanov, PhD, Vivek Rao, MD, PhD, Hugh E. Scully, MD, Christopher M. Feindel, MD, and Tirone E. David, MD

2186 Myocardial Systolic Strain is Decreased After Aortic Valve Replacement in Patients With Aortic Insufficiency
Benjamin J. Pomerantz, MD, Jason R. Wollmuth, MD, Marc D. Krock, MD, Brian P. Cupps, PhD, Pavlos Moustakidis, MD, Nicholas T. Kouchoukos, MD, Victor G. Davila-Roman, MD, and Michael K. Pasque, MD

Invited Commentary
Nimesh D. Desai, MD

2194 Do Pulmonary Autografts Provide Better Outcomes Than Mechanical Valves? A Prospective Randomized Trial
Mirko Doss, MD, Jeffrey P. Wood, MD, Sven Martens, MD, Gerhard Wimmer-Greinecker, MD, and Anton Moritz, MD

2199 Surgical Treatment of Mitral Valve Endocarditis in North America
James S. Gammie, MD, Sean M. O'Brien, PhD, Bartley P. Griffith, MD, and Eric D. Peterson, MD

2205 Vacuum-Assisted Wound Closure of Deep Sternal Infections in High-Risk Patients After Cardiac Surgery
Kyle Northcote Cowan, MD, PhD, Laura Teague, RN, MN, Sammy C. Sue, BS, and James L. Mahoney, MD

Invited Commentary
Eddie L. Hoover, MD

2213 Oxygen Delivery During Cardiopulmonary Bypass and Acute Renal Failure After Coronary Operations
Marco Ranucci, MD, Federica Romitti, MD, Giuseppe Isgrò, MD, Mauro Cotza, CCP, Simonetta Brozzi, CCP, Alessandra Boncilli, CCP, and Antonio Ditta, CCP

Invited Commentary
Gerald Weinstein, MD

2221 Should We Discontinue Intraaortic Balloon During Cardioplegic Arrest? Splanchnic Function Results of a Prospective Randomized Trial
Francesco Onorati, MD, Lucia Cristodoro, MD, Pasquale Mastroroberto, MD, Antonio di Virgilio, MD, Antonio Esposito, MD, Massimo Bilotta, MD, and Attilio Renzulli, MD, PhD

Invited Commentary
Jan T. Christenson, MD, PhD

2229 **Cardiomyocyte Apoptosis After Antegrade and Retrograde Cardioplegia**
Tommi Vähäsilta, MD, Antti Saraste, MD, PhD, Ville Kytö, MD, PhD, Markus Malmberg, MB, Jan Kiss, MB, Erkki Kentala, MD, PhD, Markku Kallajoki, MD, PhD, and Timo Savunen, MD, PhD

Invited Commentary
Jun Feng, MD, PhD, and Frank W. Sellke, MD

2235 **p38 Mitogen Activated Protein Kinase Mediates Both Death Signaling and Functional Depression in the Heart**
Meijing Wang, MD, Ben M. Tsai, MD, Mark W. Turrentine, MD, Yousuf Mahomed, MD, John W. Brown, MD, and Daniel R. Meldrum, MD

2242 **Resveratrol, a Natural Red Wine Polyphenol, Reduces Ischemia-Reperfusion–Induced Spinal Cord Injury**
Sadi Kaplan, MD, Gianluigi Bisleri, MD, Jeffrey A. Morgan, MD, Faisal H. Cheema, MD, and Mehmet C. Oz, MD

Invited Commentary
John Kern, MD

2250 **Borderzone Geometry After Acute Myocardial Infarction: A Three-Dimensional Contrast Enhanced Echocardiographic Study**
Benjamin M. Jackson, MD, Landi M. Parish, SB, Joseph H. Gorman III, MD, Yoshiharu Enomoto, MD, Hiroaki Sakamoto, MD, Theodore Plappert, CVT, Martin G. St. John Sutton, MSSB, Ivan Salgo, MD, and Robert C. Gorman, MD

Invited Commentary
Jerry Braun, MD

2257 **Early Postinfarction Ventricular Restraint Improves Borderzone Wall Thickening Dynamics During Remodeling**
James J. Pilla, PhD, Aaron S. Blom, MD, Joseph H. Gorman III, MD, Daniel J. Brockman, DVM, John Affuso, BS, Landi M. Parish, SB, Hiroaki Sakamoto, MD, Benjamin M. Jackson, MD, Michael A. Acker, MD, and Robert C. Gorman, MD

2263 **Irrigated Radiofrequency Ablation With Transmurality Feedback Reliably Produces Cox Maze Lesions In Vivo**
Chad E. Hamner, MD, D. Dean Potter, Jr, MD, Kwang Ree Cho, MD, Alison Lutterman, BS, David Francischelli, MS, Thoralf M. Sundt III, MD, and Hartzell V. Schaff, MD

2271 **Ross Operation in the Young: A Ten-Year Experience** CME
Giovanni Battista Luciani, MD, Alessandro Favaro, MD, Gianluca Casali, MD, Francesco Santini, MD, and Alessandro Mazzucco, MD

Invited Commentary
Craig R. Smith, MD

2278 **Current Status of the European Association for Cardio-Thoracic Surgery and The Society of Thoracic Surgeons Congenital Heart Surgery Database**
Jeffrey P. Jacobs, MD, Marshall L. Jacobs, MD, Bohdan Maruszewski, MD, PhD, François G. Lacour-Gayet, MD, David Robinson Clarke, MD, Christo I. Tchervenkov, MD, J. William Gaynor, MD, Thomas L. Spray, MD, Giovanni Stellin, MD, Martin J. Elliott, FRCS, Tjark Ebels, MD, PhD, and Constantine Mavroudis, MD

2285 **Correction of Tetralogy of Fallot and of Pulmonary Atresia with Ventricular Septal Defect in Adults**
Jürgen Hörer, MD, Julia Friebe, MD, Christian Schreiber, MD, Martin Kostolny, MD, Julie Cleuziou, MD, Klaus Holper, MD, PhD, and Rüdiger Lange, MD, PhD

Invited Commentary
Fernando A. Atik, MD, and Gosta B. Pettersson, MD, PhD

2293 **One and One-Half Ventricle Repair: Results and Concerns**
Ujjwal K. Chowdhury, MCh, Diplomate NB, Balram Airan, MCh, Sachin Talwar, MCh, Shyam Sunder Kothari, DM, Anita Saxena, DM, Rajvir Singh, PhD, Ganapathy K. Subramaniam, MCh, Rajnish Juneja, DM, Kizakke K. Pradeep, MS, Siddhartha Sathia, MS, and Panangipalli Venugopal, MCh

2301 **Long-Term Results of Apical Aortic Conduits in Children With Complex Left Ventricular Outflow Tract Obstruction**
John W. Brown, MD, Mark Ruzmetov, MD, PhD, Andrew C. Fiore, MD, Mark D. Rodefeld, MD, Donald A. Girod, MD, and Mark W. Turrentine, MD

2309 **Totally Endoscopic Robotic-Assisted Repair of Patent Ductus Arteriosus and Vascular Ring in Children**
Yoshihiro Suematsu, MD, PhD, Bassem N. Mora, MD, Tomislav Mihaljevic, MD, and Pedro J. del Nido, MD

Invited Commentary
Constantine Mavroudis, MD

2314 Pediatric Poststernotomy Mediastinitis
Abdullah A. Al-Sehly, MD, Joan L. Robinson, MD, Bonita E. Lee, MD, Geoff Taylor, MD, David B. Ross, MD, Murray Robertson, MD, and Ivan M. Rebeyka, MD

NEW TECHNOLOGY

2321 Free Pericardial Fat Pads Can Act as Sealant for Preventing Alveolar Air Leaks
Isao Matsumoto, MD, Yasuhiko Ohta, MD, Makoto Oda, MD, Yoshio Tsunezuka, MD, Masaya Tamura, MD, Kazuyuki Kawakami, MD, and Go Watanabe, MD

Invited Commentary
Peter Goldstraw, FRCS

2326 Miniaturized Cardiopulmonary Bypass in Coronary Artery Bypass Surgery: Marginal Impact on Inflammation and Coagulation but Loss of Safety Margins
Georg Nollert, MD, Ina Schwabenland, MD, Deniz Maktav, MD, Felix Kur, MD, Frank Christ, MD, Peter Fraunberger, MD, Bruno Reichart, MD, and Calin Vicol, MD

Invited Commentary
Song Wan, MD, PhD, and Ahmed A. Arifi, MD

2333 Safety and Efficacy of a Novel Gel for Vascular Occlusion in Off-Pump Surgery
Munir Boodhwani, MD, William E. Cohn, MD, Jun Feng, MDPhD, Basel Ramlawi, MD, Shigetoshi Mieno, MD, Alexander Schwarz, PhD, and Frank W. Sellke, MD

Invited Commentary
Verdi J. DiSesa, MD

2338 Surgical Revision After Percutaneous Mitral Valve Repair With a Clip: Initial Multicenter Experience
Nicholas C. Dang, MD, Michael S. Aboodi, Taichi Sakaguchi, MD, Hal S. Wasserman, MD, Michael Argenziano, MD, Delos M. Cosgrove, MD, Todd K. Rosengart, MD, Ted Feldman, MD, Peter C. Block, MD, and Mehmet C. Oz, MD

CASE REPORTS

2343 Hemoptysis and Massive Hemothorax as Presentation of Intralobar Sequestration
Frederik N. Hofman, MD, Hendrikus G. Pasker, MD, and Ron G. H. Speekenbrink, MD, PhD

2344 Successful Treatment for Lung Cancer Associated With Pulmonary Sequestration
Taku Okamoto, MD, Daiki Masuya, MD, Takashi Nakashima, MD, Shinya Ishikawa, MD, Yasumichi Yamamoto, MD, Cheng-Long Huang, MD, and Hiroyasu Yokomise, MD

2346 Endoscopic Ultrasound-Guided Fine Needle Aspiration for Diagnosis of Recurrent Nonsmall Cell Lung Cancer
Rebecca Lai, MD

2349 Urgent Contralateral Pneumonectomy After Single Lung Transplantation for Lymphangioleiomyomatosis
Luca Voltolini, MD, Luca Luzzi, MD, Piero Paladini, MD, Bonizella Biagioli, MD, Paola Rottoli, MD, and Giuseppe Gotti, MD

2351 Pulmonary Sclerosing Hemangioma With Metastasis to the Mediastinal Lymph Node
Hiromichi Katakura, MD, Manami Sato, MD, Fumihiro Tanaka, MD, Hiroaki Sakai, MD, Toru Bando, MD, Seiki Hasegawa, MD, Yasuaki Nakashima, MD, and Hiromi Wada, MD

2353 A Giant Endobronchial Inflammatory Polyp
İbrahim Dinçer, MD, Adalet Demir, MD, Hasan Akın, MD, Huseyin Melek, MD, and Sedat Altın, MD

2356 Cold Sensitivity as a New Side Effect After Sympathicotomy for Hyperhidrosis
Eric G. Lowe, Philip D. Allmendinger, MD, and Robert Lowe, MD

2358 Three Cases of Orthotopic Heart Transplantation for Arrhythmogenic Right Ventricular Cardiomyopathy
Masataka Yoda, MD, Kazutomo Minami, MD, PhD, Dirk Fritzsche, MD, PhD, Gero Tendrich, MD, PhD, Sebastian Schulte-Eistrup, MD, and Reiner Koerfer, MD, PhD

2360 Repair of Right Ventricular Free Wall Defect With a De-Epithelized Pedicled Myocutaneous Latissimus Dorsi Muscle Flap
Tapio Hakala, MD, PhD, Leena Berg, MD, PhD, Ensio Berg, MD, Kimmo Makinen, MD, PhD, and Petri Sipola, MD

2362 Traumatic Aorto-Right Ventricular Fistula With Aortic Insufficiency
Abdullah Kaya, MD, Paul Dekkers, MD, Antonino Loforte, MD, Wybren Jaarsma, MD, PhD, and Wim J. Morshuis, MD, PhD

2364 Saccular Aneurysm of the Aortic Cusp Associated With Discrete Subaortic Stenosis
Seiji Matsukuma, MD, Kiyoyuki Eishi, MD, Shiro Yamachika, MD, Tomayoshi Hayashi, MD, PhD, Shiro Hazama, MD, Hiroichiro Yamaguchi, MD, Tsuneo Ariyoshi, MD, Hideaki Takai, MD, Tomohiro Odate, MD, Daisuke Onohara, MD, and Makoto Yanatori, MD

2366 Coronary Embolism and Subsequent Myocardial Abscess Complicating Ventricular Aneurysm and Tachycardia
Iki Adachi, MD, Junjiro Kobayashi, MD, Hiroyuki Nakajima, MD, Kazuo Niwaya, MD, Hatsue Ishibashi-Ueda, MD, Ko Bando, MD, and Osamu Tagusari, MD

2368 Mediastinal Fibrosis Causing Myocardial Ischemia
Pankaj Saxena, MCh, and Peter J. Tesar, FRACS

2370 Myocardial Ischemia Caused by an Abnormal Origin and Course of the Left Coronary Artery in an Adult
Zahid Mahmood, FRCS, Heyman Luckraz, FRCS, William J. Penny, FRCP, and Peter O'Keefe, FRCS(CTh)

2372 Neurological Monitoring and Off-Pump Surgery in a Very High-Risk Stroke Patient
Mark F. Berry, MD, Michael L. McGarvey, MD, Li Zeng, MD, and Y. Joseph Woo, MD

2374 Expanding Retrograde Saphenous Vein Graft Aneurysm Treated With Endovascular Coiling
Dominic J. Parry, MRCS (Ed), Ian C. Winburn, MRCS (Ed), Gerald T. Wilkins, FRACP, and Richard W. Bunton, FRCAS

2376 Off-Pump Repair of a Giant Pseudoaneurysm of a Distal Saphenous Vein Bypass Graft
Wilson J. Couto, MD, James J. Livesay, MD, and Akram Allam, MD

2378 Tricuspid Valve Repair in an Infant With Multiple Obstructive *Candida* Mycetomas
Giovanni Battista Luciani, MD, Gianluca Casali, MD, Francesca Viscardi, MD, Simona Marcora, MD, Maria Antonia Prioli, MD, and Alessandro Mazzucco, MD

IMAGES IN CARDIOTHORACIC SURGERY

2382 Neonatal Right Atrial Aneurysm
Christopher E. Mascio, MD, Harold M. Burkhart, MD, Thomas Fagan, MD, Shuping Ge, MD, and Douglas M. Behrendt, MD

2383 Chronic Traumatic Aneurysm of the Left Main Coronary Artery Causing Myocardial Infarction
Dumbor L. Ngaage, FRCS(C-Th), Sumeet K. Singh, FRCS(C-Th), John F. Bresnahan, MD, Scott R. Wright, MD, and Christopher G.A. McGregor, MB, FRCS

HOW TO DO IT

2384 A New Technique of Subcutaneous Colon Interposition
Michael S. Kent, MD, Lloyd Gayle, MD, Lloyd Hoffman, MD, and Nasser K. Altorki, MD

2387 A New Technique for T-Tube Insertion in Tracheal Stenosis Located Above the Tracheal Stoma
Benoit J. Bibas, MD and Roberto A. Bibas, MD

2390 Marsupialization of Intramyocardial Left Anterior Descending Artery: A Novel Approach for Easy Access During Revascularization
Rao V. Parachuri, FRCS(C/Th), Binoy Chattuparambil, MCh, Praveen Kumar Hasabettu, MCh, Julius Punnen, MCh, Sanjay Dhaded, MCh, Dinesh R. Sadagopan, MCh, and Devi Prasad Shetty, MS

2393 Median Sternotomy Closure: A Simple Inexpensive Effective Technique
Harold Randecker, MD, FACS

REVIEWS

2395 Autofluorescence Bronchoscopy and Endobronchial Ultrasound: A Practical Review
David Feller-Kopman, MD, William Lunn, MD, and Armin Ernst, MD

2402 Impact of Intravenous Magnesium on Post-Cardiothoracic Surgery Atrial Fibrillation and Length of Hospital Stay: A Meta-Analysis
Nickole N. Henyan, PharmD, Effie L. Gillespie, PharmD, C. Michael White, PharmD, Jeffrey Kluger, MD, and Craig I. Coleman, PharmD

2407 Does Minimally Invasive Vein Harvesting Technique Affect the Quality of the Conduit for Coronary Revascularization?
Omer Aziz, MRCS, Thanos Athanasiou, PhD, FETCS, Sukhmeet Singh Panesar, BS, Rachel Massey-Patel, MBBS, Oliver Warren, MBBS, James Kinross, MRCS, Sanjay Purkayastha, MRCS, Roberto Casula, FETCS, Brian Glenville, FRCS, and Ara Darzi, FRCS, KBE

OUR SURGICAL HERITAGE

2415 Transplantation at 100 Years: Alexis Carrel, Pioneer Surgeon
Robert M. Sade, MD

CORRESPONDENCE

2419 Innovative Single-Stage Repair of Severe Asymmetric Pectus Excavatum Defects
Francis Robicsek, MD, PhD

2419 **Self-Expandable Metal Stents for Endobronchial Pathology**
CS Pramesh, MS, FRCS, and Rajesh C. Mistry, MS

Reply
Brendan Madden, MD, MS, and Abhijat Sheth, MBBS, FRCS

2420 **Sleep Deprivation and Results in Cardiac Surgery: Dangerous Study With Very Dangerous Conclusions**
Pasquale Totaro, MD

Reply
Irving L. Kron, MD, and Peter I. Ellman, MD

2421 **Longest Time of Support by the Novacor Left Ventricular Assist Device Without Pump Exchange**
Evgenij V. Potapov, MD, Yuguo Weng, MD, PhD, Thorsten Drews, MD, Michael Jurmann, MD, and Roland Hetzer, MD, PhD

2422 **Incidence of Stroke Following Coronary Surgery Without Cardiopulmonary Bypass: Does the Avoidance of Aortic Manipulation Make a Difference?**
Antony D. Grayson, BS, R. Krishnanand Pai, FRCS, and D. Mark Pullan, FRCS

2422 **Computed Tomography Scan in Redo Valvular Surgery**
Nicola Luciani, MD, Giuseppe Nasso, MD, Mariantonietta Piscitelli, MD, Gianfederico Possati, MD, and Amedeo Anselmi, MD

Reply
Kiyofumi Morishita, MD, Nobuyoshi Kawaharada, MD, Johji Fukada, MD, Kenji Kuwaki, MD, and Tomio Abe, MD

REVIEW OF RECENT BOOKS

2424 **Arterial Aneurysms: A Historical Review by Raphael M. E. Suy**
Denton A. Cooley, MD

STS ANNUAL MEETING

2425 **Program for the STS/AATS Tech-Con 2006 Meeting**

2428 **Forty-Second Annual Meeting**

2429 **Program for the Forty-Second Annual Meeting**

ANNOUNCEMENTS

A-28 **Information for Authors**

A-33 **Guidelines for Reviewers**

A-35 **Conditions for Publication Form**

A-37 **Events of Interest**

2012 **Online Discussion Forum**

2045 **Requirements for Recertification/ Maintenance of Certification in 2006**

2069 **Notice From the American Board of Thoracic Surgery Regarding Trainees and Candidates for Certification Who Are Called to Military Service Related to the War on Terrorism**

2154 **Notice From the American Board of Thoracic Surgery**

2262 **The Society of Thoracic Surgeons: Forty-Second Annual Meeting—New Location**

2270 **The Society of Thoracic Surgeons Policy Action Center**

2300 **Member and Individual Subscriber Access to the Online *Annals***

2320 **Thoracic Surgery Foundation for Research and Education**

A-41 **Classified Advertisements**

A-47 **Index to Advertisers**

INDEX TO VOLUME 80

2442 **Author Index**

2481 **Subject Index**